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ABSTRACT

Evaluation of Texas' statewide, 4-week Family Day Home Care Provider Program (FDHCPP) indicated that the program, with certain changes in procedures, should be continued. The FDHCPP used the existing network of Texas Agricultural Extension Service agents as managers to disseminate information to family day care providers on the topics of business management, health and safety, child development and guidance, and nutrition for young children. After an overview of the background of the program and the methodology of program evaluation, findings are discussed which indicate: (1) characteristics of participating child care providers; (2) practices changed as a result of the program; (3) knowledge gained by participants; and (4) participants' attitudes about program procedures and resource materials. These materials included four 20-minute videotape programs used to heighten interest and introduce recommended practices to providers, and a study manual containing narrative information, suggested activities, multiple-choice questions for self-evaluation, and various bulletins and resources for reference. In its conclusion, the report briefly lists recommended procedural changes and indicates the next stage of program implementation. Aspects of program participation by county are tabulated in an appendix. Also appended is a summary of the report. (RH)

Family Day Home Care Provider Program

EVALUATION REPORT

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PROGRAM BACKGROUND AND METHODOLOGY

EDUCATIONAL NEEDS OF FAMILY HOME CARE PROVIDERS

An estimated 469,000 Texas families rely on child care outside the home. Almost 19,000 people are registered with the Texas Department of Human Services (TDHS) as providers of child care in their own homes. A study by B. E. Aguirre, of Texas A&M University's Department of Sociology, found that providers caring for six or fewer children other than their own, usually care for children from their own neighborhood, although they are previously unknown to the parents of children for whom they provide care.

Aguirre's study involved a representative sample of 266 Texas day home care providers which found that they had little or no training in child care and development beyond their personal parenting experiences. The study also showed that day care providers wanted to have more educational opportunities, thus establishing the necessity for a pilot program which would address the educational needs of this important service industry.[1]

The surveyed providers were asked what types of educational information would be most useful. They identified the four most needed subjects as *business management*, *health and safety*, *child development and guidance* and *nutrition for young children*. Providers indicated that certain barriers prevented them from obtaining more education, such as (1) the time needed for attending classes, (2) losing income while in class and (3) managing the problems resulting from parents having to seek alternative care services. In addition, the Child Care Associate study program, designed primarily for center-based rather than home care providers, is not widely available. Currently, only a few Texas community colleges offer such a program.

Purpose of the Project. The pilot project was developed to produce and test the effectiveness of an at-home study program for family day home care providers, using a manual and videotapes as study resources. The manual contained information and resources on business management, child growth and development, child health and safety, and nutritional needs of children. Videotapes on the same four topics supplemented the manual and illustrated application of the principles by actual day home care providers.

These program materials and at-home study procedures were tested for how well they helped day home care providers increase their understanding and use of the principles being taught. These principles included:

- fostering the growth and development of individual children in their care,
- providing positive guidance for children,
- fostering co-nurturing of children through effective communication and cooperative relationships between parents and providers,
- providing food that meets the nutrient needs of young children,
- developing skills and implementing practices which promote safe and healthy day home care,
- recognizing signs of child abuse, using appropriate procedures for reporting abuse and directing parents to available sources of assistance,
- developing management skills for operating a home-based business.

The project benefits were expected to extend beyond the participating providers to other providers throughout Texas when implemented statewide on a continuing basis.

A completion certificate from this educational program could provide parents with a standard for selecting quality child care. As more providers complete the program, the quality of family day home care is expected to improve, ultimately reducing the number of children who are at risk when providers lack knowledge of appropriate care. In an economic sense, the productivity of employed parents can also be a program benefit. Parents will use informed care givers and there should be fewer interruptions in a parent's work, leaving parents more secure about their child's care.

Why Extension Responded to the Need. Texas citizens have expressed a widespread concern for quality child care. The State Legislature requested that research be done to clarify the issues in this area and Texas A&M University's 1984 study substantiated the need for more education to help providers. Extension's participation and delivery of needed educational services was a logical response to the need, but funding was the missing resource for developing and producing teaching materials to reach these family day home care providers.

The mission of the Texas Agricultural Extension Service (TAEX) is "to provide useful and practical information in agriculture and home economics and related areas, and to encourage the application of the same" by people not enrolled in colleges and universities (Smith-Lever Act, 1914). Extension's statewide delivery system makes informal educational programs accessible through existing staff

Debra Malone, Williamson County day home provider, cares for Susan Bradshaw, Shane Adler and daughter Brook.
- from Round Rock Leader, February 5, 1987

to every Texas community. The research-based education offered through Extension responds to needs of Texans. Quality child care has emerged as a critical issue for Extension's statewide educational plan for the 1990's.

Project Funding. Two state agencies and one private sector group cooperated in the Family Day Home Care Provider Program. Texas Agricultural Extension Service specialists developed materials and agents managed delivery and testing of the resources. The Texas Department of Human Services and the Corporate Child Development Fund for Texas together provided project funding.

The Corporate Child Development Fund for Texas gave initial support in 1985 to TAEX to develop a study-at-home program for providers. The fund allocated $10,000 for a writer, working with Extension specialists, to draft manuscripts for a manual. The Texas Department of Human Services granted $91,540 for this project "to improve the quality of child care by providing training for family day home care providers." The original proposal submitted by the Texas Agricultural Extension Service was for development of a four-part videotape series to complement the independent study manual and a Spanish translation, but funding restraints limited the pilot program to an English version only and costs of 600 manuals for the test group.

RESOURCE DEVELOPMENT

A team of Extension and university specialists was formed to write, test and evaluate a program which could be adapted for ongoing Extension education in all Texas counties. Specialists in adult education, financial management, health and safety, nutrition and child development formed the curriculum development unit. Specialists in

communications and evaluation gave expertise toward program delivery and analysis. Dr. Aguirre served as program consultant, uniting the Texas A&M University academic segment with the Extension delivery network for practical application of study recommendations.

Development of the Study Manual. Extension specialists worked with a technical writer for the Corporate Child Development Fund for Texas to develop a manual for at-home study. As chapters were prepared, they were critiqued for practicality and readability by 28 members in a provider review team. Final copies were printed commercially for insertion into 3-ring loose-leaf binders for easy study and resource reference.

The study manual contained instructions to providers for the four core content chapters, supplementary materials and videotapes. Each core content chapter had narrative information, suggested activities to try, multiple-choice questions to help providers check their own learning, and various bulletins and resources for reference.

The four core content chapters and related subsections were:

Child Development and Guidance
- * Meeting Children's Needs
- * Fostering Children's Growth
- * Learning Through Play
- * Guiding Children's Behavior
- * Communicating With Parents

Nutrition
- * Nutrients Children Need
- * Feeding Infants, Children
- * Planning Menus, Buying Food
- * Food Handling and Storage

Health and Safety
- * Preventing Accidents
- * Basic First Aid
- * Childhood Illnesses

Business and Management
- * Family Day Care as a Business
- * Keeping Records for Paying Taxes
- * Managing Space and Time

Appendix sections contained publications from these sources: The Texas Agricultural Extension Service; The American Heart Association—Texas Affiliate Inc., Plough, Inc., McNeil Consumer Products Company, Scott & White Clinic, Texas Department of Human Services, Southeast Texas Poison Center, Texas Department of Health, and US Internal Revenue Service.

Provider Review Team. Early in project development, county Extension agents from every Extension district submitted names of providers who would serve for six months to critique the study materials. Providers were not paid, but each was acknowledged in the final study manual and given a personal copy of the manual. The 29 reviewers, including two state staff members from TDHS, were minority and non-minority family day home care providers with enough day care experience to recognize both provider needs and the likelihood of the program materials meeting those needs, and those with a reputation for providing high quality child care. The review team members had two weeks to study each section of the manual and call attention to any difficulties in wording or clarity of information.

Production of Videotapes. The aim of video development was to reinforce visually the major concepts presented in the manual through application by specialists and providers in real family day home settings.

Scripts for four separate videos corresponded to the four content areas in the study manual. Each was written by an Extension communications specialist and reviewed by appropriate subject matter specialists. A professional actress was hired as host to provide continuity through the four taped segments, but Extension specialists were featured as teachers and interviewers of providers. A private home was used for location segments.

Videotaping was contracted to *Image One*, a Dallas based firm. *The Texas Council of Family Child Care Associations* and *Child Care Dallas, Inc.* were involved in locating competent family providers in the Dallas metropolitan area to appear on the video segments. These groups also helped to obtain parental releases for the involvement of children.

Videotape costs included services of the production company, taping and duplication of 560 videotapes, which carry a joint copyright of the Texas Agricultural Extension Service and the Texas Department of Human Services.

SELECTION OF PILOT COUNTIES

Criteria for site selection included (1) potential for enrollment of 20 registered family providers in the county, (2) geographic distribution across Texas with participation in all 12 TDHS regions and 14 TAEX districts, and (3) interest and existing responsibilities of the Extension agents who would manage the program locally. Management tasks were carried out by county Extension agents-home economics as a part of their existing Extension program development responsibilities.

The Texas Agricultural Extension Service is structured into 14 geographic districts, each having from 11 to 21 counties. District Extension directors have administrative leadership of county programs. The Texas Department of Human Services has 12 geographic regions, each with a regional administrator. Selection of counties was made by TAEX

administrators with input from TDHS, assuring the same opportunity for all regions of both agencies.

In all, 28 counties were chosen for the pilot program, representing two per Extension district. The piloting counties were: Baylor, Brazoria, El Paso, Harris, Harrison, Hidalgo, Hill, Hunt, Kaufman, Kerr, Lamar, Lavaca, McLennan, Midland, Nacogdoches, Panola, Parmer, Potter, Randall, Runnels, San Patricio/Aransas, Scurry, Tom Green, Travis, Val Verde, Wichita, Williamson and Young County.

Training Agents for Project Management. A three-day session was held in July 1986 at Texas A&M University for agents from the pilot counties; 27 agents and 5 district Extension directors participated. They learned about requirements of pilot program implementation and received guidelines for program management.

The training objectives were for Extension agents to:

- increase their awareness of child care issues,
- recognize requirements and policies affecting providers,
- understand the aims and contents of the pilot program,
- develop skills to carry out and evaluate the program,
- increase educational opportunities for family day home care providers.

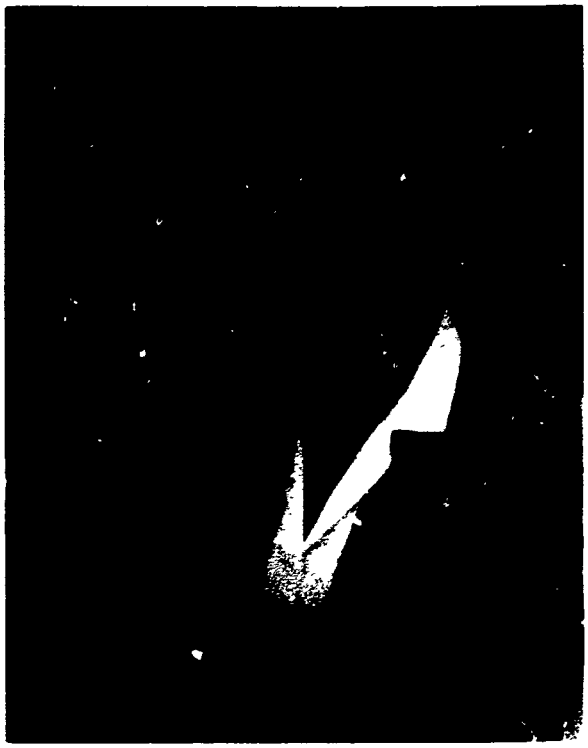
A keynote address was given by Dr. Frances Alston, Assistant Director of the Day Care Council of New York City, author of ***Caring for Other People's Children.***[2] Chris Ros-Dukler, Assistant Commissioner for Licensing at Texas Department of Human Services, spoke on the Texas situation for providers. Dr. Ben Aguirre, Associate Professor of Sociology at Texas A&M University, reported on his 1984 study findings that were the basis for this pilot program.

Extension specialists on the project team presented highlights in each subject area of the study and on procedures for promotion, enrollment and evaluation. A panel of three providers, including the president of Texas Council of Family Child Care Associations, shared insights into the needs of the targeted audience. During the training session, program manuals, videotapes and record forms were distributed to agents for their county enrollment uses.

IMPLEMENTATION AT PILOT SITES

The following components were parts of the agents' management responsibilities.

Time Frame for Program Implementation. Agents were to begin the project in July 1986 and complete activities in November 1986. During that period, they would establish a community task force, do program promotion and recruitment, enroll a targeted number, distribute materials to participants and handle the evaluations.



Dr. Frances Alston, author of *Caring for Other People's Children*, spoke at July 1986 training for agents who piloted the program in 28 counties.

- photo by Mark Claesgens

The project was divided into two four-week phases at the county level; agents were expected to enroll 10 providers in each phase. Each phase had a specific time frame for participation, enabling a study of knowledge and practice changes in a controlled time period. An unanticipated advantage to having two groups was that agents gained experience in recruiting participants and in handling project procedures that helped in the second enrollment period.

Project funding provided each participant with a study manual to keep after the pilot program. Videotapes were provided only on a check-out basis because only 280 sets were produced, one set for each two participants.

Community Task Force. A community task force was recommended to support the agent with program promotion, accessing video equipment as needed and planning for recognition of participants as they finished the program. Agents were encouraged to involve the following people in the task force: an Extension home economics committee member, a registered family home provider, a local TDHS staff member, a family-based child

Texas A&M Professor Benigo E. Aguirre shared findings from 1984 research that was the foundation for Extension's pilot program.

- photo by Mark Claesgens

care association member, a media representative, a videotape distributor or equipment dealer, and a public library representative.

Planning for Video Equipment Access. Many homes already have video equipment, but plans were made to help providers without VCRs to locate access through a dealer, distributor, neighbor, library or school.

Recruitment and Enrollment of Participants. Agents were asked to enroll 20 providers, ten in each of two program periods, with preference given to registered family providers. Wherever the potential for reaching 20 providers seemed unlikely, the other piloting county in that Extension district was asked to recruit additional providers. Twenty per county gave an enrollment capacity of 560, although 500 providers was the contract with TDHS.

Recruitment leaflets, posters and releases for newspapers, radio and television were supplied to agents for program promotion and recruitment. Agents also received TDHS's current listing of registered family home providers.

Continuing Education Units. Opportunity for Continuing Education Units (CEU) was based on an assumption that providers would participate because of their desire for professional improvement. Arrangements were made with Texas A&M University's Office of Professional Development to award three CEUs to qualifying participants, an equivalent to 30 hours of coursework. It is important to note that in 1986, TDHS did not require any credentials or documentation of professional improvement for registration or continuing practice for family day home care providers.

Participants would qualify for CEUs by meeting three requirements: (1) take the pre-study test, (2) achieve a passing score on subject matter questions in the the post-study questionnaire, and (3) turn in the study record documenting study time. Providers meeting these requirements who desired the CEU certification were to send a signed approval form to TAMU with $5.00, the usual fee for processing CEUs by TAMU.

A qualifying score was mandated by the Professional Development Office for an independent study program to award CEUs. This program was the first non-classroom study course granted approval for CEUs by Texas A&M University.

Meetings with Participating Providers. Each agent arranged a start-up meeting in her own county to finish enrollments, collect applications for Continuing Education Units, administer the pre-study test and distribute materials.

Agents administered pre-study questionnaires to get baseline data about providers' subject matter knowledge before receiving or studying program materials, and to collect information about providers and their experiences with child care. Agents mailed the pre-coded, anonymous questionnaires to College Station for data summary.

A study manual was issued to each provider along with a set of videotapes and instructions about the four-week study period and how to return materials. Providers were encouraged to contact the county Extension agent for information or clarification during the period of study Finally, agents made arrangements for securing other evaluation information from providers when they finished the study.

At a closing meeting, agents administered the post-study questionnaire that documented knowledge gains and evaluation of the project methodology. Agents also collected a study record from each provider that documented the provider's approach toward studying at home and the kinds of suggested activities that were actually tried. They also arranged home interviews with four to six participants in the county.

Recognition of Providers Completing the Program. All providers completing the program's evaluation requirements received "completion certificates" provided by TAEX. Agents were encouraged to present the certificates at a special recognition event, although in some cases it would be necessary to distribute them personally or by mail.

EVALUATION METHODOLOGY

A comprehensive evaluation was conducted to fulfill four objectives:

- establish a base for judgments about the project,
- provide information for determining the project's ability to reach day home care providers, its effectiveness in improving providers' knowledge and actions, and the future management and delivery of program materials,
- communicate to fundors, and
- help in awarding Continuing Education Units.

Information Sources. Evaluation information was obtained from five instruments. *All* participants provided the following: pre-study questionnaire, provider's study record and post-study questionnaire. Interviews were conducted with a sample of participants for in-depth information about certain practice changes. In addition, a survey was done with a panel of 55 expert judges to set evaluation criteria and agents gave their assessments at the end of the program. Each evaluation method is described below.

In the ***"How Much Means 'Success'?" Survey,*** a panel of expert judges provided opinions that helped to establish the expectations for the study findings [Forest and Marshall, 1978].[3] Members of the provider review team, Extension agents in piloting counties, Extension specialists on the project team, and TAEX and TDHS personnel who attended the July training were invited to indicate the minimum finding that, in their opinion, would indicate this project had been successful. Before the pilot program began, the 55 respondents (out of 70 in the groups described above) set an expectation for enrollment numbers, completion rate, score to qualify for CEUs, level of perceived helpfulness of the materials, the number of activities providers should try and the percentage of providers who should make some changes in their child care practices. They determined the importance of various criteria for judging the success of this project. See Table 1 for their responses.

Findings should be judged according to criteria of actual trial or change of practices, not how many enroll or use all of the resource materials. Trial or change of practices in the subject matters of this project was felt the most important indicator of success, but only half (52-57 percent) of the participants should be expected to make the practice change, perhaps due to the four-week time limitation for participating in the pilot study, and/or interview scheduled soon after the program.

In determining their expectations for this program (Table 2), the panel said that evaluation findings about practice changes, for example, should show at least 52 percent of participating providers to be starting or changing some nutrition practice, 54 percent to be starting or changing a child development or guidance practice, 56 percent to be starting or changing a health or safety practice and 57 percent of providers to be changing a business and management practice. The judges panel felt that at least 73 percent of the providers should rate the manual and videotapes as useful or very useful for these resources to be considered adequate. They said enrollment should be 73 percent of the project's capability and completion should be 70 percent—this pilot program should enroll at least 408 providers and 392 of those enrolling should complete the study.

Table 1
THE MOST IMPORTANT CRITERION FOR EVALUATING PROJECT

Number and percent of judges who felt this was most important		Criterion
N	Percent	
24	44.4	Practices that were started or changed as a result of taking part in this program
13	24.1	Change in knowledge as reflected in the difference in pre- and post-test scores
9	16.7	Providers' ratings of the helpfulness of resource materials
5	9.3	Number of registered and non-registered providers who participated
2	3.7	General perceptions about the project
1	1.9	Number of *registered* providers who participated in the program
54	100.0	

The ***Pre-Study Questionnaire*** was administered to all participants. The questions were pre-tested in a non-pilot county among providers (N=13) for instrument reliability and usability and for preparing the data analysis computer programs. Some questions were revised before using in the pilot program.

The pre-study questionnaire included 12 questions about the provider [*years in business, if child care is regular occupation, number of children cared for by age, activities in day care program, frequency of certain problems, how participant learned about this study course, previous training received, schooling, age, marital status, household income, previous contact with Extension]* and 75 test items in subject matter areas [*13 items on business and management, 37 on child development and guidance, 11 on nutrition and 14 on health and safety*].

Test questions were derived from information in the study manual and checked to assure they also were treated in the videotapes, so that providers who used only the manual or videotapes might have access to critical information.

Agents were taught how to administer the Pre-Study Questionnaires. Each instrument had been coded with an identification number to assure anonymity. Each participant sealed her/his own questionnaire booklet and turned it in to the county agent-home economics, who mailed them to the project evaluator in College Station. Each agent had a list of codes and names (with addresses) but did not see provider's responses. The evaluator supervised test grading, but did not have access to names of the providers. This procedure was explained to the participants so that they would understand both the research aspect of the study and that their actual scores would remain private.

A ***Post-Study Questionnaire*** was administered after four weeks of study to all participants. The contents of the *post-study* questionnaire were 8 questions about the participating provider's assessment of the project [*their main reason for participating; a reasonable fee for the study program; actions provider has started or changed as a result of the program; perceived helpfulness of the course*] and 75 test items in subject matter areas. These test questions in the post-study were identical to the pre-study, except they were in a different order.

Agents were instructed to match the post-study questionnaire code with the same code number on the pre-study questionnaire for each participant. These were also sealed by the provider, turned in and mailed by the agent to the project evaluator, along with the provider's study record bearing the same code. Pre-addressed envelopes were provided to agents for each evaluation step.

The ***Provider's Study Record*** was filled out by all participants, recording the amount of time spent in studying videos and reading the manual, noting which suggested activities were tried and whether the provider acquired any resource materials listed in appendix. Study Records were turned in with the Post-Study Questionnaire and mailed to College Station for data summary.

The three instruments together [***Pre-Study*** and ***Post-Study Questionnaires*** and ***Provider Study Record***] constituted fulfillment of all evaluation requirements for pilot study participants.

Home Visit Interviews. Agents asked participating providers if they would agree to an interview with the agent in the provider's home after the study period. The purpose of the visit was to get in-depth data on the practices these providers were incorporating into their own activity as an outcome of the study. Agents in each county randomly selected up to six providers from their lists of those who volunteered, then made arrangements for a half-hour visit at a time convenient to the provider.

Table 2
EXPECTATIONS SET FOR EVALUATION FINDINGS

Mean Standard	Criterion	Response Range	Standard Deviation
408 people should enroll		100-560	112.4
72.2%	should be new contacts for Extension	5 - 95%	24.6
70%	should complete program	25 - 100%	15.0
72 of 100	should be passing score	53 - 90%	8.6
68.3%	should use all of Manual	33 - 100%	20.1
73.6%	should rate the Manual as "useful—very useful"	25 - 100%	15.4
76.2%	should rate videotapes as useful or very useful	25 - 100%	15.4
42.6%	are expected to apply for Continuing Education Units	2 - 100%	23.0
31.2%	of suggested activities should be tried	4 - 95%	22.0
About 50%	should change a practice:		
52.3%	in nutrition	10 - 95%	25.2
56.1%	in health/safety	10 - 100%	22.7
54.1%	in child guidance	10 - 100%	24.5
57.2 %	in business/management	10 - 100%	23.9

Agent's Project Assessments were provided by all participating agents on their use and perceived usefulness of various promotion methods, the response to the project in their counties [*number of inquiries, assistance given to participants*], agents' suggestions about procedures for handling the project, a rating of components of the July training, and questions related to the agent's interest and commitment to the pilot project.

Enrollment data from the counties provided information about the number of registered and non-registered providers who participated.

Data analysis. Because of TDHS's request for participation among registered providers across the geographic regions, the pilot program's design precluded random sampling and generalization of the findings among Texas providers. Therefore, descriptive rather than inferential statistics generally were used to analyze the evaluation data. Frequencies and percentages were derived to describe the findings in this report.

The study hypothesis—*that Family Day Home Care Providers will increase their knowledge of business and management, health and safety, child development and guidance, and nutrition concepts and practices through participation in the independent study*—was operationalized by using mean scores of pre-tests and post-tests and the t-test.

THE FINDINGS

Data on the impact of this program are of three types: (1) the extent to which providers tried recommended practices in the subject matter areas, (2) the extent of change in participant's pre- and post-study scores in subject matter areas, and (3) providers' evaluation of the helpfulness of these changes. These areas are treated in this section of the report, along with a description of certain characteristics of the providers who took part in the pilot program.

The study results reported in this section are based on the 437 complete sets of evaluation instruments from providers—data from pre-study questionnaires, post-study questionnaires and provider study records. Where noted, certain tables are data from 128 providers who were interviewed at the close of the pilot program.

Figure 1
HOW PROVIDERS LEARNED ABOUT THE STUDY PROGRAM

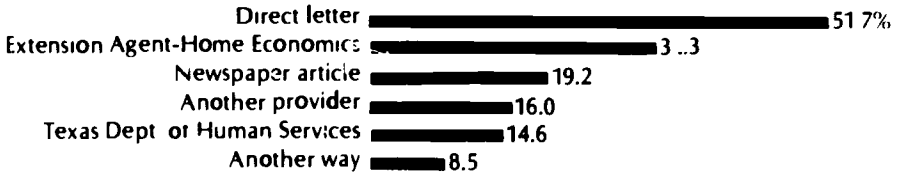


Figure 2
WHY PROVIDERS PARTICIPATED

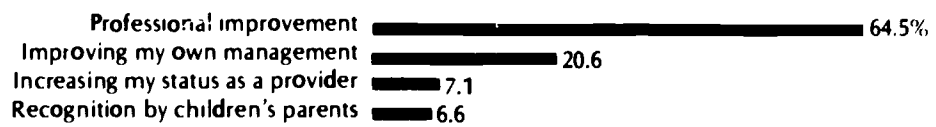


Figure 3
AGE OF PROVIDER

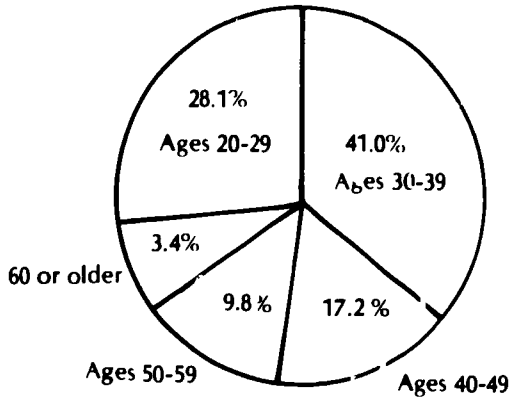
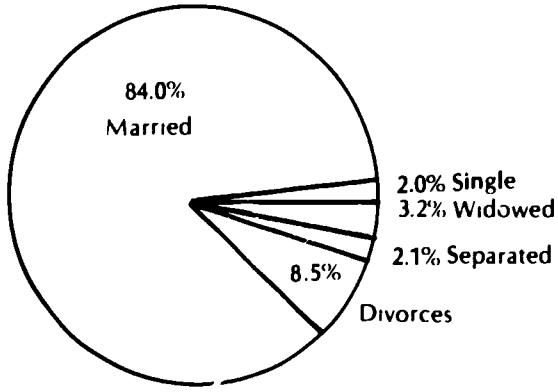


Figure 4
MARITAL STATUS OF PROVIDER



THE PARTICIPATING CHILD CARE PROVIDERS

How Providers Learned about the Course. A variety of recruitment methods were recommended for use to the agents, but providers indicated that most learned about the program either through a direct letter or contact from an Extension agent. A number of providers read a newspaper article about the independent study or heard of it from a friend. Other ways that they learned about the course were from radio or television (6.6 percent), at meetings where it was announced (3.8 percent), or by direct contact from a supervisor, relative, or friend (3.2 percent).

For 54 percent of these providers, this study program was the first contact they had with TAEX. Before this pilot program started, the judges' panel expected that most participating providers (75%) would have had no prior contact with Extension's educational programs.

Why Providers Participated. Family day home care providers are interested in establishing their businesses as a professional service, according to the Texas Council of Family Child Care Associations. Pilot participants affirmed this as their primary motivation for taking part in this learning experience.

Enrollment and Completion. Each selected county in the pilot program was targeted for an enrollment of 20 providers, with the exception of one county which aimed for 40 providers, to reach the project's capacity of 560. Although the funding contract was for 500 participants, 504 actually enrolled (100 percent of the contract, 90 percent of the project's capacity).

The 437 providers who completed all aspects of the program were 86.7 percent of those who enrolled in the pilot program and 78.0 percent of targeted enrollment potential of 560. The numbers

Figure 5
PROVIDER'S HOUSEHOLD INCOME LAST YEAR

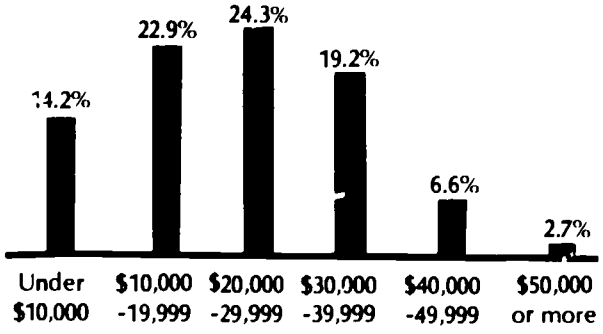
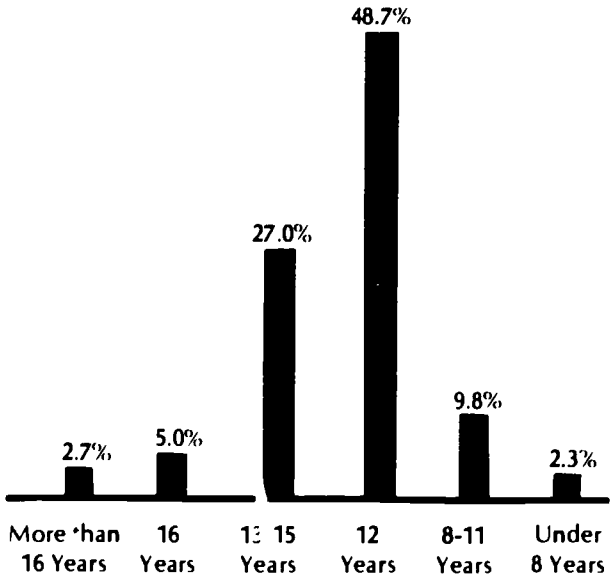


Figure 6
YEARS OF EDUCATION OF PROVIDER



from each piloting county included in the data base are shown in the *Appendix*.

Characteristics of Pilot Participants

Age. Younger providers, 20-39 years of age, were the predominant program users. The average age of participating providers was 36.5 years. Aguirre (1984) and Nowak (1977)[4] found that registered providers were primarily in their 30's or older. (See Figure 3.)

Marital Status. Most providers (84 percent) in this pilot program were married. Nine providers (2 percent) had never married and 13.8 percent were separated, divorced or widowed. (See Figure 4.)

Household Income. Income levels varied widely. Perhaps because many participants were in their early years of career development, 27 percent had household incomes under $20,000. The finding that a large percentage of these providers were married may account for the 43.5 percent with household incomes between $20,000 and $50,000 and the 9.3 percent with household incomes exceeding $40,000. (See Figure 5.)

Education and Training Received. Program participants were education oriented. Most (83.4 percent) had completed at least 12 years of school. The average schooling completed was 12.5 years. More than a third (34.7 percent) had some education beyond high school. Aguirre's study found that only 64.9 percent of registered and 81 percent of unregistered providers had attended school for 12 years or more. Participants in this program were more likely to have completed high school or had more years of education. (See Figure 6.)

In addition to formal schooling, providers indicated they had received some training in areas related to their business. However, almost half had not received training in subjects basic to their child care service. The training received was more often in nutrition, health and child development topics. Fewer had studied record keeping and business management topics. (See Figure 7.)

CHARACTERISTICS OF PARTICIPATING PROVIDERS' CHILD CARE BUSINESS

Years in Business. Almost one-fifth (18.5 percent) of participating providers had been in business just one year. More than half (59.5 percent) had been in business 2 to 9 years. About 10 percent had been in business more than 10 years. (Fig. 8)

A large majority (85.3 percent) viewed their service as a regular occupation. These providers had been in business an average of 4.9 years. Some (12.4 percent) did not view it as an occupation, which may mean it is a short-term service.

Number of Children in Their Care. Providers in this study cared for an average of 9 children, which suggests that they care for their own children as well as others (or that data were skewed by the 13-14 participants who were associated with day care centers). Predominantly, providers cared for one or two children in each age group, with the main age group being 1-2 year olds, followed by 3-4 year olds, then those under age 1 or 5-6 years old, respectively. These providers were least likely to care for children under age 1 and over age 6; slightly more than half (53 percent) cared for no children in either of these age groups. (Fig. 9)

A low percentage of participants in this study cared for six or more children, the maximum number for a registered day home, although a few participants (3.2 percent) seemed to be associated with day care centers by their indication that they cared for more than ten children in certain age groups.

Activities Included in Their Day Care. Activities reported below reflect that participating providers used a combination of quiet and active, indoor and outdoor activities to foster the development of children in their care. (Fig. 10)

Other activities were mentioned. They included, but were not limited to selected TV use (Sesame Street, Mr. Rogers), cooking, swimming, exercises,

Figure 7
TRAINING RECEIVED BY PROVIDERS

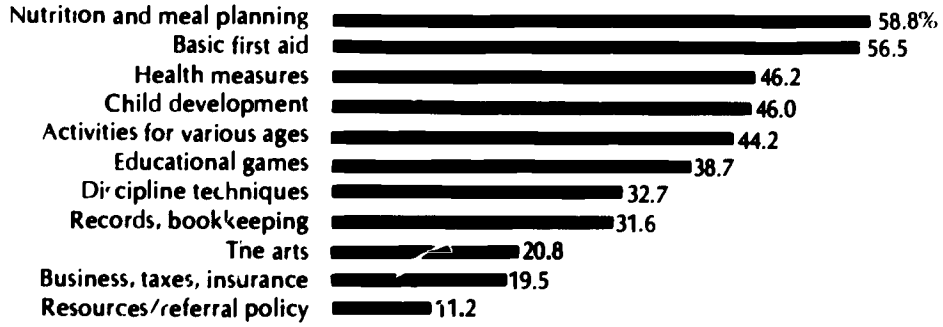


Figure 8
NUMBER OF YEARS IN CHILD CARE BUSINESS

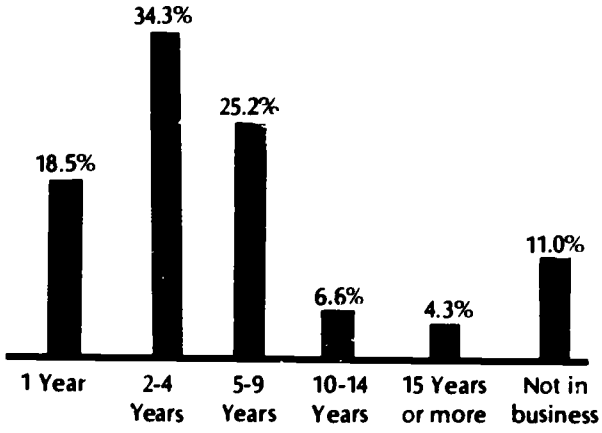


Figure 9
PERCENTAGE OF PROVIDERS CARING FOR CHILDREN BY CERTAIN AGE GROUPS

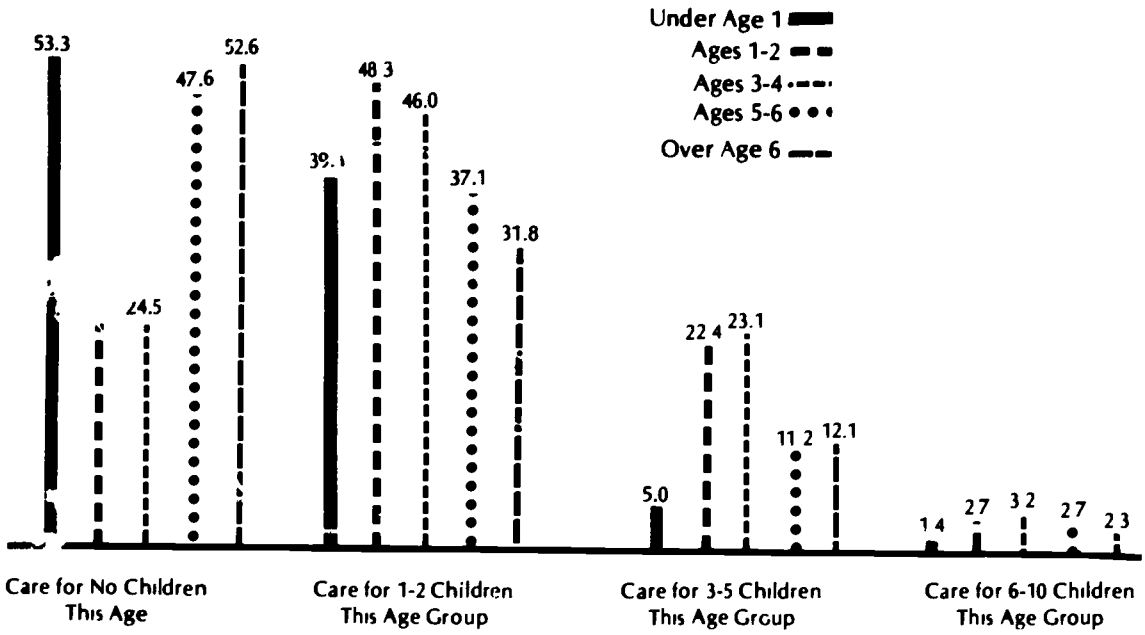
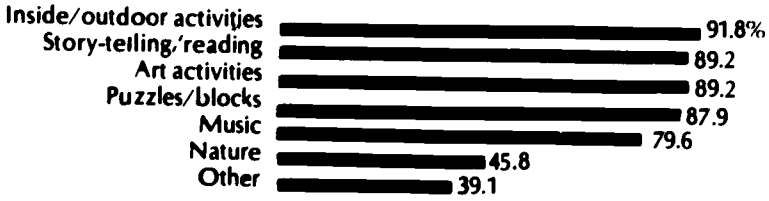


Figure 10
ACTIVITIES CARRIED OUT IN DAYCARE PROGRAM



walks, jump rope; numbers, alphabet, phonics, shapes, flash cards, field trips, sand and water play, dress-up, play school, play house, Bible stories and chapel, puppet shows, computer games and Spanish as second language.

Problems Encountered in Day Care. Adult learning tends to be problem-centered. Providers were asked to rate how often they experience selected problems. Table 3 shows the problems they said they "very often" experienced, compared to those that were never a problem to them.

Some reported frequently encountering certain problems other than those listed in the questionnaire, such as "children knowing too much about sex acts," problems triggered by parent conflicts, children crying and not wanting to go home, parents not being on time to pick up the children, and parents' attitudes toward child care as a professional business.

Certain problems were never experienced by these providers. Three-fourths of the providers said they never saw children with suspicious marks or bruises. About half said they never had conflicts with parents, problems with collecting fees or in keeping children clean. About a third had no problems with business records. About one in four providers never experienced problems with getting children to eat, with children crying for parents or with potty training.

Table 3
PROBLEMS IN CHILD CARE BUSINESS

	ENCOUNTERED VERY OFTEN
Business records	15.3%
Children fighting/breaking things	8.7
Collecting fees	8.0
Getting children to eat	6 6
Potty training	6.6
Child discipline	4.6
Keeping children clean	3.4
Other problems	3.9

	NEVER ENCOUNTERED
Suspicious bruises or marks	75.3%
Conflicts with parents	51.0
Keeping children clean	48.1
Collecting fees	47.6
Business records	34 5
Getting children to eat	29 7
Children who cry for parents	25.2
Potty training	21.3

SUMMARY OF PILOT PROVIDER CHARACTERISTICS

Participants in this project were typically age 30 or younger and well educated, but they had little training in subjects basic to their service. They were motivated to provide a professional service and operate a sound business. They were likely to be married and care for their own children while they cared for others' children. Most of the children in their care were at least a year old, but not yet in school. Problems they encountered most were with record keeping and children fighting. Problems they encountered least were suspicious bruises or marks and conflicts with parents.

PRACTICES CHANGED AS A RESULT OF THIS PROGRAM

"Practice Change" Rated as Most Important Success Criterion. Extension professionals and family day care providers who set the criteria by which this program should be judged felt that "practice change" was the most important factor to examine. Furthermore, these professionals and providers said that at least half of the enrolled providers should make one or more changes in some practice as a result of participating in this program, if this program were to be considered successful.

Specific practices and suggested activities to try were recommended within the study manual as principles for quality child care. Examples were cited in the post-study evaluations as benchmarks for comparing providers' own current and intended future actions. All providers (N=437) were asked to indicate whether they were using certain practices in each of the four subject matter areas. In addition, some providers (N=128) were interviewed about specific practices that were started or changed in their home business settings. In each case, responses were given about the impact of those practices toward caring for children.

Providers named one of the listed practices that had the greatest impact in their own case (Table 4). These were not necessarily the ones that had the greatest number of trials or changes, but were practices that providers said had made an important difference in how they cared for children.

Positive discipline and three other practices relating to guiding children's growth were the highest impact actions. Practices in the management, safety, nutrition and health areas ranked next in order of perceived impact.

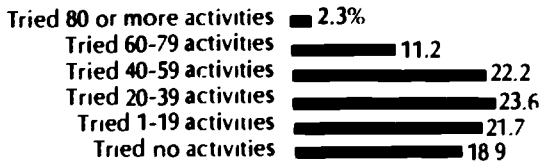
Table 4
PRACTICE OR ACTION HAVING THE GREATEST IMPACT ON PARTICIPATING PROVIDERS

	Number	Percent
Use positive discipline to direct child's behavior	99	22.7
Have rules and routines about behavior that both parents and children know	50	11.4
Talk with parents about child's behavior-both positive and negative	36	8.2
Provide materials and space for creative play	27	6.2
Review financial records to see if enough is earned to compensate for efforts and cover costs	23	5.3
Childproof the home by removing hazards from yard and home	20	4.6
Serve recommended foods in each food group	19	4.3
Keep a record for each child (medical, attendance, signs of progress, etc.)	18	4.1
Plan and practice what to do in an emergency	16	3.7
Write menus for each week	15	3.4
Use a contract and policy statement with the parents	13	3.0
Use feeding techniques that encourage emotional and physical development	12	2.7
Provide space for both noisy and quiet play	9	2.1
Post emergency telephone numbers near the phone	6	1.4
Recognize when children have eaten enough	5	1.1
Develop a network with other providers	3	.7
Check each child for signs of illness before parents leave	3	.7
Keep receipts of tax deductible expenses	3	.7
Clean the kitchen surfaces	3	.7
Assemble a basic first aid kit	1	.2
Not ascertained	56	12.8
	437	100.0

Trial of Activities Started a Change. Trying an activity may be the start of a change within the adoption process. Within a four-week time frame, providers were to try a variety of suggested actions that could help them operate more efficiently, increase the health and well-being of children in their care, guide children's behavior and improve nutrition. More than 87 different activities were mentioned in the four areas.

As an average, the 437 providers in this pilot test were found to have tried about 30 suggested activities. But 84 participants said they did not try any activity. Among the 353 providers who tried one or more of the 87 activities, the average number they tried was 37, or 42.5 percent of the listed activities.

Figure 11
PERCENTAGE OF PROVIDERS WHO TRIED SOME OF THE 87 SUGGESTED ACTIVITIES



Among providers who tried any activities (N=353), no differences were found in the kinds of activities they tried. The mean number of activities tried in the four subject matter sections did not vary. On average, these providers tried 44 percent of the 25 child development and guidance activities, 42 percent of the 24 nutrition activities, 45 percent of the health and safety activities and 44 percent of the 16 business and management activities.

About 20 percent of the providers failed to try activities in child development and guidance; about 33 percent did not try any activities in business and management. A very small number tried activities in only one area, as shown in Table 5. The trend of activities tried only in certain areas followed the order of the manual; fewer activities were tried in the later sections of the manual. It may be concluded that some providers did not try an activity in an area because they lacked time in the study period.

Table 5
PROVIDERS TRYING ACTIVITIES ONLY IN CERTAIN AREAS

	Tried only this area		Tried none in this area	
	N	%	N	%
Child Development	8	1.8	91	20.8
Health and Safety	3	.7	105	24.0
Nutrition	5	1.4	106	24.3
Business and Management	6	1.4	143	32.7

Including activities at the end of each section in the manual was intended to motivate providers toward using the information. That providers tried almost a third of the 87 activities in the brief four-week study period indicates that such activities are useful. The specific activities each person tried may be related to her/his current needs and accessible resources.

The criterion for success was for participants to try 31 percent (28) of the suggested activities. On average, the 437 participants tried 34.5 percent (30) of the suggested activities. Wide use by providers suggests that recommended activities should remain part of the educational program.

THE CHILD DEVELOPMENT AND GUIDANCE AREA

Although family day home care providers have major responsibilities for the care and guidance of young children for a significant portion of their waking hours during a significant portion of their formative years, providers themselves report the need for education in child development and child guidance. Aguirre's 1984 study and participants in this 1986 pilot program documented that less than half had received training in areas related to child development and guidance.

The program objectives in this area were to foster growth and development of children, to enhance positive guidance for children, to improve co-nurturing of children through effective communication and cooperative relationships with children's parents. (See Figure 12.)

Knowledge gained. Thirty-seven items in the pre- and post-study tests measured participant knowledge about discipline, self-concept, guidance, provider-parent communication, physical growth, intellectual, emotional and social development.

In the pre-study test, participants answered 53 percent of the child development and guidance questions correctly. In the post-study test, they answered 65 percent of the same questions correctly, showing an average gain of 12 percent. Table 6 presents a comparison of the scores before and after study of child guidance and growth.

Providers appeared to have adequate prior knowledge about provider-parent communication, as indicated by the high pre- and post-test scores (94.1 percent and 96.8 percent). Providers had greater difficulty in answering questions about the earliest age of development for some intellectual, physical, emotional and social behaviors of children.

The average gain in items pertaining to growth and development was 11.5 percent, although in one area there was a score decrease of 1.1 percent and in another area a significant gain of 30.4 percent.

The highest score gain was in the sequence of body growth and physical development of children, showing marked improvement of 30.4 percent. However, many lacked understanding about emotional development (for example, the earliest age at which a child develops "a sense of self" or "hates to lose") as indicated by proportionally lower pre-study and post-study scores (39.5 percent and 48.6 percent). On items related to children's intellectual development, providers showed no improvement in knowledge; instead average scores decreased by 1.1 percent. Possible explanations for the decrease in scores may be the way the test responses were structured for the age groups and failure to give attention to or remember information in the study manual.

The amount of time these providers studied had an influence on their scores, but *optimum* study time did not seem to be *maximum* study time. Providers who studied the Child Development and Guidance section between 5-9 hours tended to score higher than those who said they studied more than 10 hours. Table 7 shows the mean post-study score (percentage of correct answers for the Child Development and Guidance questions only) according to the amount of time the participants gave to studying the Child Development section in the study manual.

Suggested activities to try. In the study manual were 25 child development and guidance activities that providers could try as they took part in the four-week program. Suggested actions were intended to lead toward practical application of the concepts presented in the manual. Trial of these activities was documented in the study record.

Figure 12
PROVIDERS WHO RECEIVED TRAINING IN CHILD DEVELOPMENT OR GUIDANCE

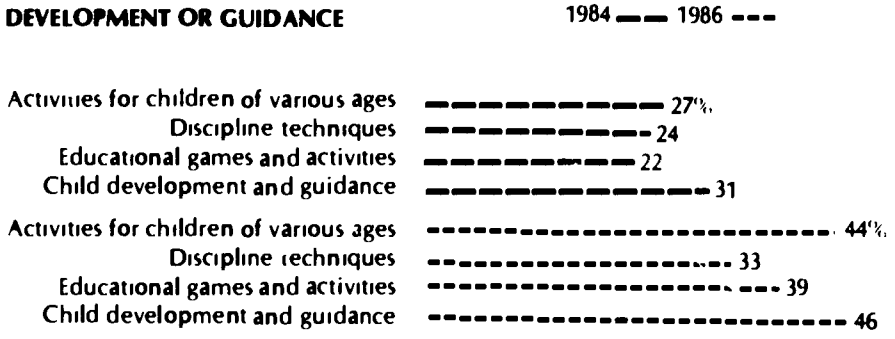


Table 6
PERCENT OF CORRECT ANSWERS TO QUESTIONS IN CHILD DEVELOPMENT AND GUIDANCE AREAS

Topic	Number of items	Percent Correct Pre-study	Percent Correct Post-study	Percent Change
Self-concept	1	75.5%	87.0%	11.5
Child guidance/discipline	5	70.9	87.7	16.8
Communication w/parent	1	94.1	96.8	2.7
Growth and development				
• sequence of growth	6	36.7	67.1	30.4
• physical development	6	46.4	56.3	9.9
• emotional development	6	39.5	48.6	9.1
• intellectual development	6	56.1	55.0	-1.1
• social development	6	57.9	66.9	9.0

Most providers (79.2 percent) indicated that they tried one or more of the child development and guidance activities, 8 providers tried activities only in the child development area. The most often tried activity was "praising children for positive behavior."

Eleven suggested activities in this area were tried by 40 percent or more of the providers. Six activities were tried by 30-39 percent of the providers, and eight activities were tried by fewer than 30 percent. The least tried activity was locating recommended library books to help children deal with a family crisis.

Providers commented about using the suggested activities and noted those they plan to incorporate into their regular program, although two felt that "a lot of the examples for handling situations were idealistic" and "some suggestions for handling discipline problems would be difficult to enforce in a home situation with mixed ages of children." Other providers gave these comments: "Planning for daily activity seems to help things run smoother,".... "We have a regular routine — I involve the children in a lot of activities." "[I am] providing new experiences for the children—walks, etc.," and "bought new toys, play singing games and do one new activity per week."

Practices changed. In the post-study questionnaire, providers indicated the practices they had started, changed or planned to start. This step denoted a possible commitment beyond trial and toward adoption of the change. Four practices were considered to have an important impact in this area: using positive discipline to direct behavior, providing space and materials for varied play activities, using rules and routines which are understood by both parents and children, and communications between parents and the provider.

About half (51 percent) of the providers indicated they were making some change in a listed practice. Sixty-two percent indicated they were already using positive discipline. Another 35 percent indicated plans to start using positive discipline as a result of the program. (Tables 8 and 9)

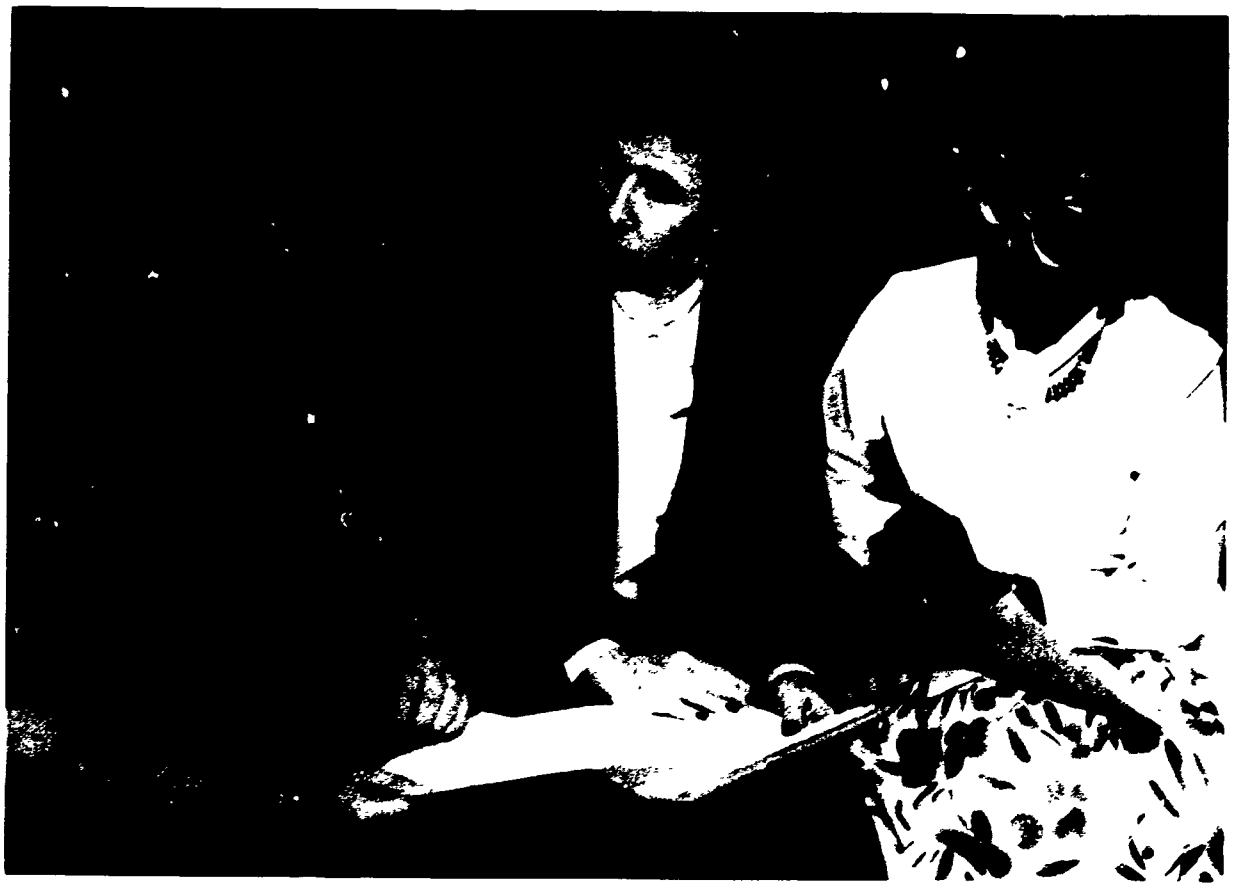
Among the interviewed providers (N=128), a similar trend of trial and use of child development practices was seen. Many had started or changed toward positive discipline techniques and this practice was also said to have the greatest impact among the guidance and development practices listed.

Table 7
POST-STUDY SCORES FOR CHILD DEVELOPMENT/ GUIDANCE QUESTIONS BY AMOUNT OF TIME THE MANUAL WAS STUDIED

	Percent Mean Score
Did not study	54.7
Studied 1-4 hours	67.2
Studied 5-9 hours	69.2
Studied 10-14 hours	66.3
Studied 15 hours or more	66.7

Table 8
NUMBER AND PERCENT OF PROVIDERS ALREADY USING RECOMMENDED CHILD GUIDANCE PRACTICES

	Number	Percent
Use positive discipline to direct child's behavior	269	61.6
Provide space for both noisy and quiet play	288	65.9
Have rules and routines about behavior that everone knows	303	69.3
Provide materials, space for creative play	315	72.1
Talk with parents about child's behavior, both positive and negative	334	76.4



Home day care graduates Betty Livengood, left, and Katie Henry, right, with Potter County Extension agent Irene Keating.

- photo by Mark Claesgens

When providers were asked to mention one practice in any of the four study areas that had the greatest impact in their caring for children, "positive discipline" was the most frequently mentioned (99 providers, 23 percent). Before their study in this pilot project, 80 percent of providers indicated

Table 9
CHILD DEVELOPMENT AND GUIDANCE PRACTICE CHANGES

	Started Doing		Changed Doing		Plan to Start		Number and Percent of Providers Changing Who Were Not Already Doing	
	N	%	N	%	N	%		
Use positive discipline to direct child's behavior	85	55.5	42	27.4	26	17.0	153	91.1
Provide space for both noisy and quiet play	43	34.7	23	18.7	58	46.8	124	83.2
Have rules and routines about behavior that everyone knows	37	34.6	23	21.5	47	43.9	107	79.8
Provide materials and space for creative play	35	33.0	25	23.6	46	43.4	106	68.9
Talk with parents about child's positive and negative behaviors	34	43.0	17	21.5	18	22.8	79	76.7

Table 10
USE AND IMPACT OF CERTAIN PRACTICES - FROM INTERVIEWS WITH SELECTED SAMPLES (N = 128)

	Started-Changed N	Started-Changed %	Plan to Start N	Plan to Start %	Percent Greatest Impact
Variety of play experiences	71	55.4	16	12.5	12.5
Plan for daily activities	73	57.0	21	16.4	13.3
Involve child in home activity	54	42.2	31	24.2	12.5
Use positive discipline	86	67.2	7	5.5	35.9
Use observation notes w/parents	63	49.2	29	22.6	22.7

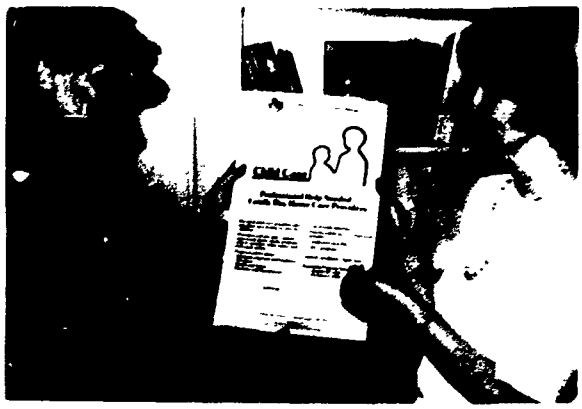
they had some problems with child discipline. They needed information about child development and guidance because they were concerned about communicating with parents.

"Using rules and routines everyone understands" was mentioned as a practice with the greatest impact by 50 (11 percent) providers, "talking with parents" was cited by 36 (8 percent) and "creating space for play activities" was mentioned by 27 (6 percent). (See Table 4, p. 15.)

Providers who were interviewed (N = 128) reinforced this general finding. Using positive discipline had the greatest impact on their child care practices. (See Table 10.)

The data from the evaluation documented that self-instructional programs can positively impact upon provider knowledge levels and practices. Providers stated that they gained confidence in their work with children and were enjoying it more. They recommended the course for other providers.

Adele Wright studying manual which corresponds with videotapes for Child Care program.



Adele Wright, Brazos County provider and review team member, discussing the Child Care program with Extension Family Life specialist Diane Welch.

Adele Wright greets mother Jolene Evans and daughter Hillary at her home.

Playing and sharing time for Adele and children in her home.

- photos by Mark Claesgens

THE NUTRITION AREA

The two most important changes expected in this study were acquiring new knowledge and practicing one or more new critical child care behaviors by participating providers.

Knowledge gained. Test items included questions to check current and new knowledge about fundamental nutrition practices, nutrients, food groups, common nutrition problems in infancy and childhood, when to introduce solid foods, safe food handling and storage, meal planning and food buying. Providers scored an average of 55 percent on nutrition questions in the pre-study test and 68 percent on the post-study test.

The post-study test was administered after participants had studied the home-study manual and viewed the video tapes. Participants' knowledge increased by 13 percent in the eleven nutrition subject matter questions. Table 11 compares the percentage of correctly answered questions on the pre-study and post-study tests.

Before they studied, most providers incorrectly answered the questions that dealt with the number of food groups, the temperature range at which bacteria grow best and ideal refrigerator and freezer temperatures. After reviewing the home-study manual and videotapes, scores in these areas increased. Providers had retained the correct information from their study.

The greatest change in pre-study and post-study scores occurred on the question about the number of different food groups.

The least change occurred with questions on ways to save money when buying food and common nutrition problems in infants. These two topics already had relatively high understanding, as evidenced by the pre-study scores.

Table 11
PERCENT OF CORRECT RESPONSES TO NUTRITION QUESTIONS

Topic	Percent Pre-study	Percent Post-study
Identify the number of food groups	23.6	77.1
How to save money when buying food	70.7	78.0
When to introduce solid foods	44.2	66.4
Role of protein in the body	51.7	71.6
Ideal temperature for bacteria to grow	23.6	44.4
Ideal refrigerator/freezer temperatures	28.4	45.8
A common nutrition problem in infants	88.3	94.7
Examples of minerals	60.9	60.2
Serving foods rich in Vitamins A and C	72.8	69.1
Examples of vitamins	57.9	57.0
Symptoms of food poisoning	80.5	84.0

Table 12
SUGGESTED NUTRITION ACTIVITIES TRIED BY PROVIDERS

Most Often Tried Activity	Percent
Writing cycle menus	47
Encouraging children to eat a variety of food	46
Planning snd serving sugar-free snacks	46
Critiquing menus to reduce, fat, sugar and salt	46
Checking ads for the best food buys	45
Creating special environment during infant feeding	44
Reading food labels	43
Using unit pricing	43
Allowing children to assist with simple tasks	40

Table 13
SUGGESTED NUTRITION ACTIVITIES TRIED BY PROVIDERS

Occasionally Tried Activity	Percent Trying
Collecting recipes for easy to prepare main dishes	37
Critiquing children's eating habits (likes/dislikes)	36
Saving grocery receipts for a month to assess ways to assess ways to reduce bill by $5.00 weekly	34
Evaluating cycle menus for nutritional value, affordability, appeal, etc.	33
Giving children recommended serving size for child's age...make changes as needed	32
Preparing cycle menus to fit availability of seasonal foods	28
Listing foods on hand that are good Vitamins A/C sources	28
Planning a snack-time tasting party for children	28
Writing a feeding schedule for infants under care	27
Writing shopping lists to match cycle menus	27
Allowing children to help plant a vegetable garden or visit a neighbor's garden	25
Contacting TDHS for information on financial support related to nutrition services	22

Activities were tried. Twenty-four activities were suggested in the nutrition area for providers to try. They were presented to reinforce learning and give the providers another perspective or approach toward child care practices. Tables 12-14 show the percentage of providers who reported trying each activity.

Practices were changed. Other parameters considered important in the nutrition area included (1) making changes in practices to encourage growth and development, (2) writing weekly menus, (3) learning to recognize signs that a child has had enough to eat, and (4) serving the recommended number of foods from each of the major food groups.

At the end of the study program, providers reported the following: 41 percent were engaging in practices that would encourage growth and development, 33 percent had begun to write cycle menus, 19 percent were able to recognize symptoms that tell when a child has eaten enough, and 14 percent were serving the recommended number of foods from each of the fruit-vegetable, bread-cereal, milk-cheese, and meat-poultry-fish-beans groups. They learned that foods from the fifth food group (fats and sweets) should be selected with care and served sparingly because these foods provide calories but few nutrients. (See Tables 16 and 17.)

Providers in the interview sample (N=128) gave responses to the agent about many aspects of the study that could be ascertained only in this way. They said that information in the study manual and videotapes was extremely useful in helping them increase their knowledge about the nutrients that children need, feeding infants and children, planning menus, buying food, handling and storing it safely.

The practice having the greatest impact on them varied widely among providers who were interviewed. Using a menu cycle, serving nutritious snack foods and cooking to reduce kitchen time were all rated as "greatest impact" by about a fourth of persons interviewed.

Table 14
SUGGESTED NUTRITION ACTIVITIES

Least Tried Activity	Percent Trying
Contacting Extension for general information	12
Contacting Extension for publications on feeding children	12
Contacting Extension for information on caring for handicapped children	8

Table 15
PROVIDERS WHO WERE ALREADY DOING CERTAIN NUTRITION PRACTICES

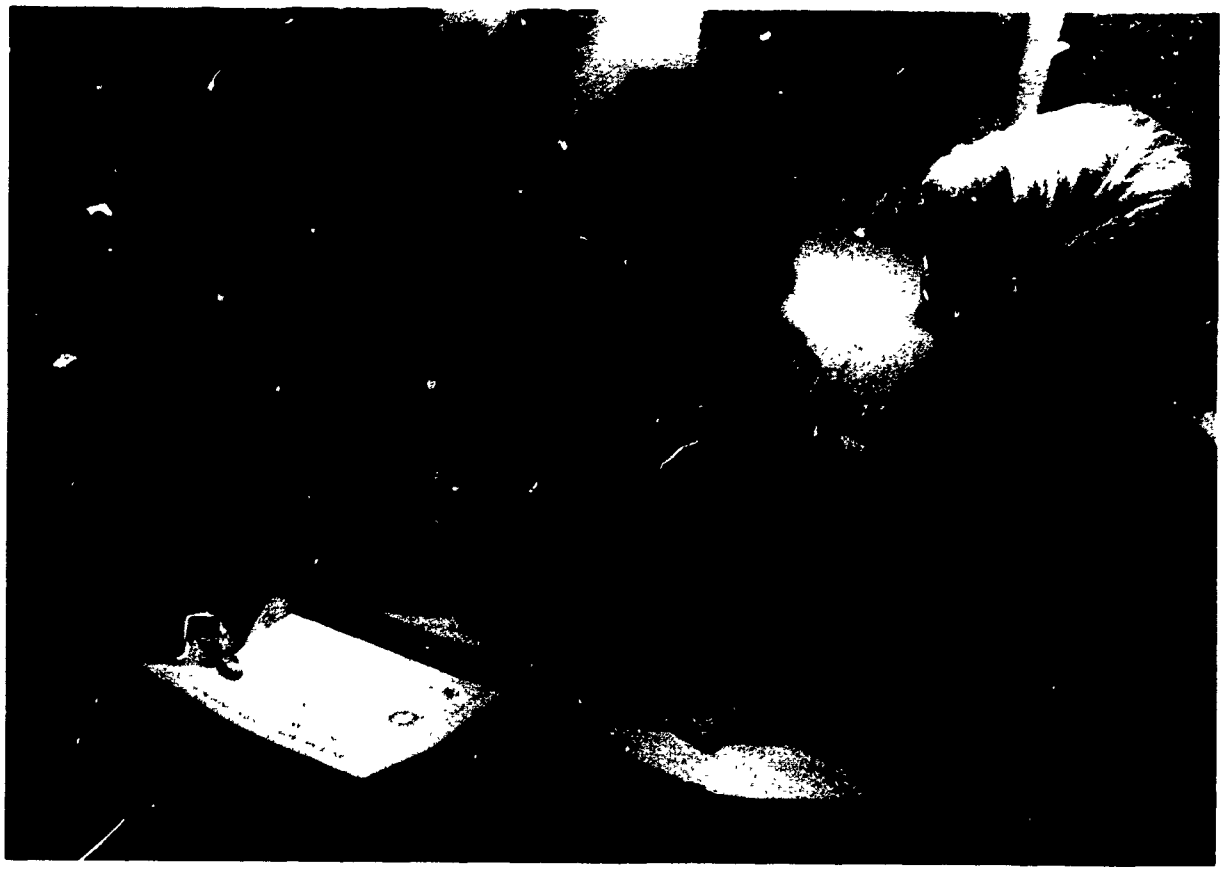
	Number	Percent
Using feeding techniques that encourage emotional and physical development	216	49.4
Writing menus for each week	244	55.8
Recognizing when children have eaten enough food	331	75.7
Serving recommended foods in each food group	339	77.6
Cleaning kitchen surfaces	388	88.8

Table 16
PROVIDERS WHO CHANGED NUTRITION PRACTICES

	Started Doing N	Changed Doing N	Plan to Start N	No and % Changing Who Were Not Already Doing the Practice	
Use feeding techniques that encourage emotional and physical development	67	28	82	177	80.1
Write menus for each week	60	12	72	144	74.6
Recognize when children have eaten enough	39	17	28	84	79.2
Serve recommended foods in each food group	27	14	21	62	63.3
Clean kitchen surfaces	5	14	4	23	46.9

Table 17
USE OF PRACTICES (FROM INTERVIEWS, N = 128)

	Started		Changed		Plan to Start	
	N	%	N	%	N	%
Use a written menu cycle	37	28.9	26	20.3	22	17.2
Serve nutritious snack foods	39	30.5	32	25.0	4	3.1
Serve recommended portions	40	31.2	22	17.2	6	4.7
Cook to reduce kitchen time	39	30.5	16	12.5	22	17.2



Bonnie Boardman and Gloria Longbine talk with Extension agent Barbara Fowler at the providers' graduation reception in Randall County.

- from Amarillo Daily News, December 29, 1986

THE HEALTH AND SAFETY AREA

Children in day care settings tend to get more infectious illnesses than do children cared for in their own homes and parents are concerned about the safety of the day home environment. The adequacy of providers' knowledge and ability to act correctly toward emergencies and illnesses was the focus of this study area.

Improved knowledge. Knowledge of health and safety was evaluated by an identical battery of pre- and post-study questions. Sixty percent of questions in this area were answered correctly on the pre-test. Seventy percent of questions were answered correctly on the post-test. The relatively high score on the pre-test may be a result of the earlier training that 57 percent of providers said they had in basic first aid, as well as the earlier training in health and safety measures that 45 percent had received.

Pre-study knowledge was greatest (over 80 percent correct responses) in how to treat first and second degree burns, how to treat a cut with severe blood loss, which illness a fever and runny nose are symptomatic of and which emergency numbers should be posted by the telephone.

The greatest knowledge gain was in correct first aid for convulsions (+30.2 percent), the correct procedure for giving mouth-to-mouth resuscitation (15 percent), and the importance of hand washing and good sanitary practices to help prevent the spread of diarrhea (11.6 percent).

The least knowledge gain was in immunizations required for an 18-month old infant (3.2 percent). In another question, about normal axillary body temperature, there were 9.8 percent fewer correct responses in the post-test than in the pre-test. Possible explanations include guessing on both tests, believing they already knew the information, or feeling it was irrelevant so they skipped over it in the manual.

The scores of providers in the Health and Safety questions varied by the amount of time they said they studied that section. Table 18 indicates that the optimum study time may have been 1-9 hours.

Activities were tried. In the manual were 22 different health and safety related "things you might try" to improve the quality of child care. The most frequently tried activity (51.5 percent of providers) was a hand washing demonstration with practice time for children. The least tried activity (20.1 percent of providers) was reading a particular issue of the *Texas Child Care Quarterly*.

Table 18
POST-STUDY SCORES IN HEALTH AND SAFETY QUESTIONS BY AMOUNT OF TIME THAT SECTION OF MANUAL WAS STUDIED

	Percent Mean Score
Did not study	63.1
Studied 1-4 hours	69.2
Studied 5-9 hours	67.8
Studied 10-14 hours	61.7
Studied 15 hours or more	62.8

Table 19
HEALTH AND SAFETY ACTIVITIES MOST TRIED

Activity	Number	Percent Trying
Hand washing demonstration/practice	225	51.5
Assemble first aid kit	218	49.9
Hazard check of house	217	49.7
Check immunication records	209	47.8
Hazard check of yard	193	44.2
Arrange space of ill child	190	43.5
Study communicable disease chart	186	42.6
Read labels/remove household poison	179	41.0
Establish safety rules for children	174	39.8
Write a "sick child policy"	170	38.9

Table 20
HEALTH AND SAFETY ACTIVITIES OCCASIONALLY TRIED

Activity	Number	Percent
Write a disaster plan	145	33.2
Practice fire safety rules	140	32.0
Observe children's vital signs	139	31.8
Investigate hospital admission policy	136	31.1
Study accident report forms	126	28.8
Teach children emergency plans	125	28.6
Find out about head lice treatment	123	28.1
Investigate first aid and CPR classes	121	27.7
Investigate car safety seats	113	25.9
Attach "Mr. Yuk" stickers	113	25.9

Cris Ros-Dukler, Texas Department of Human Services administrator, describes the agency's goals for improving skills and professionalism of Texas day home providers. - *photo by Mark Claesgens*

Ten of the 22 activities were tried by 39 percent to 52 percent of providers (see Table 19). Ten activities were tried by 26 percent to 33 percent of providers (Table 20), and two activities were tried by only 20 percent of providers (Table 21).

Practices were started or changed. As a result of studying the health and safety section of the manual, most providers reported they were changing at least one practice (Table 22). Seventy-two percent reported they were changing ways of handling emergencies, 42 percent said they were checking for illness before the parents left their children, and 39 percent were assembling a first aid kit. Twenty percent reported posting emergency numbers by the telephone and 12 percent reported childproofing their facility by removing hazards from their home and yard.

Table 21
HEALTH AND SAFETY ACTIVITIES LEAST TRIED

Activity	Number	Percent Trying
Investigate poisonous plants	89	20.4
Read *Child Care Quarterly*	88	20.1

When the practice changes resulting from the independent study program are added to already established practices, 90-97 percent of participants can be shown to be using the five important health and safety practices listed in Table 22.

Practices making the greatest impact. The greatest impacts on the 128 interviewed providers were for practices related to safety. "Knowing what to do in an emergency" was cited as the health and safety action with the greatest impact on these providers. Almost 55 percent said they had started or changed their approach toward emergency preparedness.

Childproofing by removing hazards from the home and yard had the next greatest impact in this area. This action was started or changed by 52 percent of providers who were in the special interview sample.

Need for a healthy and safe environment. In day care, children have increased opportunities for exposure to illness from contact with other sick children. Parents are often unwilling or unable to take time off from work to care for a sick child and child care facilities designed to care for sick children are limited, if available at all. When child care workers do not know how infectious illnesses are spread, they can unknowingly increase the risk of illness outbreaks primarily through not practicing frequent hand washing.

Table 22
HEALTH AND SAFETY PRACTICES OF PROVIDERS

Practice	Already practicing N	Already practicing %	Starting practice after project N	Starting practice after project %	Total %
Post emergency numbers near the telephone	333	76	89	20.4	96.6
Assemble basic first aid kit	253	58	167	38.2	96.1
Learn and practice what to do in an emergency	101	23	316	72.3	95.4
Childproof yard and home by removing hazards	364	83	53	12.1	95.4
Check each child for signs of illness before parent leaves the child	211	48	182	41.6	89.9

THE BUSINESS AND MANAGEMENT AREA

Family day care providers often lack knowledge of the business and management aspects of running a home-based business [Aguirre, 1984, Cox, 1980[5]; Sale, 1973[6]]. In this pilot project, nearly twice as many providers reported frequent business related problems than any other type of problem. Although only 15.3 percent of the participants indicated they "very often" had business related problems, this was the highest frequency reported for any type of problem. Other business related problems they identified were collecting fees (8 percent) and conflicts with parents (1.8 percent).

According to the Small Business Administration, many small businesses fail within the first two years. Nearly one-fifth (18.5 percent) of the providers in the study had been in business for less than a year. Over half (52.8 percent) had been in business for four years or less. The mean number of years in business by providers who considered family child care as their regular occupation (85.8 percent) was 4.9 years.

Aguirre found that about one-third of registered providers and over half of unregistered providers had received training on recordkeeping, but only about 10 percent of registered and 6 percent of unregistered providers had received training on family day care as a business, including taxes and insurance. Participants in this pilot project had received prior training on a variety of topics, but fewer had received training on business, taxes and insurance (19.5 percent) and records and bookkeeping (31.6 percent) than on other topics, such as health, safety, nutrition and child guidance (ranging from 58.8 percent to 32.7 percent).

Providers studied by Aguirre were very interested in receiving further training. Sixty-six percent of registered and 81 percent of unregistered providers indicated an interest in receiving free training. A previous study by Kilmer [1979][7] found that providers were interested in learning about three business related topics: recruiting children, contracts and fee collection, and tax information and business practices.

One fifth (20.6 percent) of the providers in this pilot project indicated the main reason they participated was to improve their management as care providers, while 64.5 percent cited the main reason as professional improvement. Providers may have associated the opportunity to qualify for CEUs as visible proof of engaging in professional improvement activity.

Table 23
COMPARISON OF TEST SCORES FOR ALL TEST ITEMS AND FOR BUSINESS AND MANAGEMENT ITEMS

	Percent Mean Score on Pre-Study	Percent Mean Score on Post-Study
All items	55	68
Business and management	57.4	74

Table 24
PERCENTAGE OF PROVIDERS WHO CORRECTLY ANSWERED BUSINESS AND MANAGEMENT QUESTIONS

Test item	Percent Pre-study	Percent Post-study	Score gain
Primary goal of setting fee	51.9	94.5	42.6
Best way to record income when paid in advance	35.2	29.1	-6.1
Classification of expenses as direct expenses:			
Rent of home	72.8	80.5	7.7
Soap and toothpaste	68.9	91.5	22.6
Food	91.3	95.4	4.1
Broken window repair	54.5	71.9	17.4
Telephone bill	76.2	84.4	8.2
High chair	60.2	84.4	24.2
Family day home assoc. dues	53.3	74.8	21.5
Main reason for carrying liability insurance	52.2	71.4	19.2
What contracts with parents should specify	23.1	41.4	18.3
Which tax form used by providers who net $400 or more per year	52.2	60.0	7.8
Helpful way to plan children's activities	37.1	60.9	23.8

Pre-study/Post-study scores. A pre-test to measure providers' knowledge in four key areas was administered at the beginning of the project. After providers completed the study materials, a post-test was administered to measure changes in knowledge in the four content areas. A comparison of mean scores for the tests appears in Table 23. Pre-test performance on the business and management section of the test was similar to overall pre-test performance. However, participants achieved a higher mean score on business and management questions (74 percent) than on the post-test as a whole (68 percent).

Except for one item on the post-test, providers increased their knowledge of business and management subject matter, as indicated in Table 24. The percentage of providers who answered pre-test items correctly ranged from 23.1 percent (what contracts with parents should specify) to 69.8 percent (classification of expenses as direct expenses). The percentage of providers who answered post-test items correctly ranged from 29.1 percent to 94.5 percent. The greatest increase between pre- and post-test items related to the primary goal of setting a fee. Almost 95 percent of the providers correctly answered the question, for a score gain of 42.6 points. For the question concerning the best way to record income paid, fewer providers correctly answered on the post-test (29.1 percent) than on the pre-test (35.2 percent).

Overall, the findings suggest that providers increased their knowledge of business and management practices from participating in this pilot project.

Mean scores on both the pre- and post-tests were analyzed according to the length of time providers had been in business. Regardless of the number of years these providers were in child care businesses, mean scores on the knowledge test showed little variation. The highest post-test scores were achieved by those in business for less than ten years, while the greatest improvement in post-test scores were by those who had been in business 15 years or more, as indicated in Table 25.

Table 25
MEAN SCORES BY YEARS IN CHILD CARE BUSINESS

Years in business	Percent Mean Scores		Percent Score
	Pre-study	Post-study	Gain
1 year	55.0	67.3	12.3
2 to 4 years	54.8	68.6	13.8
5 to 9 years	57.0	69.3	12.3
10 to 14 years	52.4	65.9	13.5
15 years or more	52.7	66.7	14.0

Indicated practice changes. Of all the measures of success by which to judge the pilot program, "practices that were started or changed as a result of participating in this program" were identified as the most important criterion. The panel of 55 judges said that 57.2 percent of participants should start or change a business management practice.

More than half of the participants started or changed at least two business management practices, as indicated in Table 26. However, a closer analysis of the data shows that over 70 percent of participants who said they did not previously apply the practices in question started or changed a practice. Over 80 percent of these participants started to keep records or changed their method of keeping records on each child and also analyzed business records to determine if income covered

Table 26
PROVIDERS WHO STARTED OR CHANGED BUSINESS AND MANAGEMENT PRACTICES

Practice	Number of responses	Percent of providers (N = 437)	Percent of providers not already using the practice
See if income covers costs	235	53.8	81.9
Start a providers network	219	50.1	68.7
Use contract, policy statement	214	48.9	78.1
Keep records for each child	158	36.2	82.7
Keep receipts for taxes	103	23.6	71.5

Table 27
PERCENTAGE OF PROVIDERS INTERVIEWED WHO USE OR PLAN TO USE PRACTICES RELATED TO BUSINESS AND MANAGEMENT

Practice	Percent Started	Percent Changed	Percent Plan to start	Percent Greatest impact
Keep records on business	32.8	29.7	16.4	28.9
Use contract-policy statement	20.3	15.6	29.7	25.0
Network with other providers	21.1	7.0	35.2	23.4
Keep record for each child	28.9	20.3	18.0	12.5

costs. Nearly 80 percent (of those making a change) also indicated a practice change with regard to contracts and policy statements. These results reflect important changes in business and management practices.

Impact of the practices. When program participants were asked to indicate which practices or actions had the greatest impact on them, "keeping financial records" was rated by 5.3 percent as the action or practice with the greatest impact. This practice received the fifth highest rating of the 20 practices listed. Clearly, "positive discipline" and "using rules and routines that everyone knows," the two actions rated as having greatest impact, have the most immediate impact on the family day home environment.

In a special subsample, 128 providers were interviewed in their homes by county Extension agents to determine the extent to which certain practices were being used by the providers. The two business and management practices which were most widely used or changed were those related to keeping business records and keeping records on children (Table 27). More than half of the providers had started to keep business records or had changed their record keeping practices.

There was a direct relationship between practices started or changed and participants' perceptions of the practices which had the greatest impact on running a family day home business. Keeping business records was perceived as having the greatest impact (28.9 percent), followed by keeping records for each child (25.0 percent), using contracts and policy statements (23.4 percent) and networking with other providers (12.5 percent).

Activities tried. The business and management section of the manual suggested 16 activities or "things you might try" to improve the provider's child care practices. From an analysis of provider study records, the five most frequently tried activities reinforced practices important to the effective management of home-based family day care. Table 28 shows the suggested activities which were most tried by pilot program providers.

Table 28
PARTICIPANTS WHO TRIED LEARNING ACTIVITIES

Most frequently tried activities	Percent
List the advantages and disadvantages of a home based day care business	45.5
Consider if space in home is being utilized to best advantage	45.3
Review and modify current system of recording income and expenses	44.4
Find out how parents of children in care heard about your service. Consider how you would fill a sudden vacancy.	42.8
Discuss with other providers: fees, reduce expenses, how to handle collection problems	41.6

KNOWLEDGE GAINED THROUGH THIS STUDY

An aim of this pilot project was to determine the kind and amount of learning change that could occur through an independent study technique, by studying apart from classes and direct assistance from a teacher. To evaluate whether the participants learned (gained knowledge), "before" and "after" tests were given to the participants on subject matter in the study materials. The study hypothesis was that mean scores would improve.

Scores Improved. Pre-tests and post-tests were found to be significantly different in their mean scores at t=25.74 (pr > 0.0001). The mean pre-study score was 55 percent or 41 correct responses out of 75 possible. The mean post-study score was 68 percent or 51 of 75, showing an increase of 13 percent (9 more correct answers) in the four-week period.

A quarter of the providers (24.7 percent) raised their scores on the post-study from 20-45 percentage points. A third (31.3 percent) improved their scores from 1-9 percent and another third (33.6 percent) improved scores from 10-19 percent. One in ten pilot study participants made no improvement.

The pre-study and post-study scores were affected by age, income and educational levels, but not by marital status or the number of years in child care business. Mean scores are shown in the series, Figures 13-18, using the demographic variables for comparison.

As to the score changes by certain variables, younger participants tended to make greater score changes, but they already tended to have higher scores than older persons. Marital status showed little effect on score changes, primarily because most participants were in the married group. Nor did the number of years in child care business affect scores; the rate of score change was similar across groups (years in business).

Score changes were consistent with income levels—the higher the income the higher the score, presumably because of greater opportunity for education by those with more income. "Under $10,000" and "Don't know my household income last year" were the two groups with substantially lower scores and less score change than the other groups.

As with income levels, scores and increases in scores tended to rise by levels of education. The lowest improvement was made by those who had less than 8 years of schooling. Almost all providers in this pilot study (89.7 percent), indicated they had used material provided to help them study and learn the concepts. They used the question and answer sheets at the end of each chapter as study-helps.

Post-test scores tended to increase according to the provider's involvement in the program. As trial of activities increased, average post-test scores increased, shown in Figure 18.

Summary of Knowledge Gained. The before-and-after testing design allowed a close examination of the amount of improvement these providers made in their scores on critical knowledge and practice information in the study manual. Although identical questions were used before and after the study period, the providers did not know that in advance. The study period was brief and a high mark had been set as qualifying score on the post-study test.

The overall direction of change and the number who qualified for Continuing Education Units recommended this scoring level to be used in the continuing program's test phase. The gains by 90 percent of the participants indicate that independent study is an acceptable educational method, particularly for people who are motivated toward improving their professional status.

County Extension Agents-Home Economics previewed the video tapes that were available to providers in the at-home study course.

- photo by Mark Claesgens

Figure 13
MEAN SCORES BY AGE GROUP

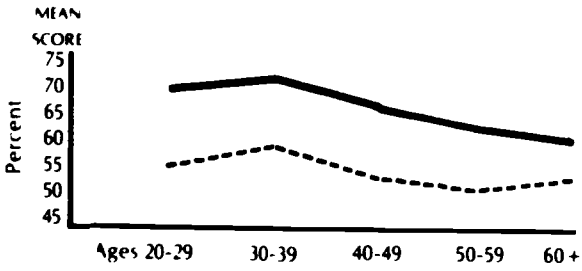


Figure 14
MEAN SCORES BY MARITAL GROUP STATUS

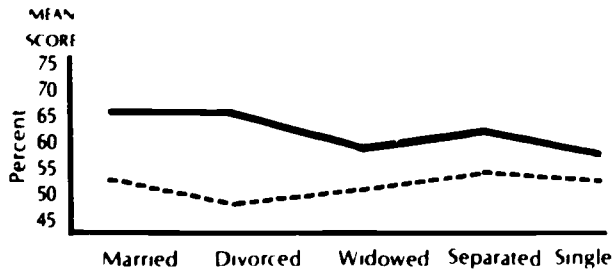
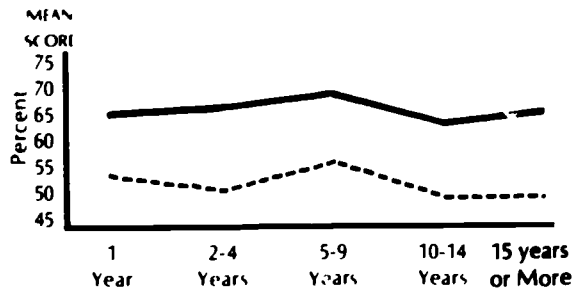


Figure 15
MEAN SCORES BY YEARS IN BUSINESS



Key: --- pre-study
—— post-study

Figure 16
MEAN SCORES BY HOUSEHOLD INCOME LEVEL

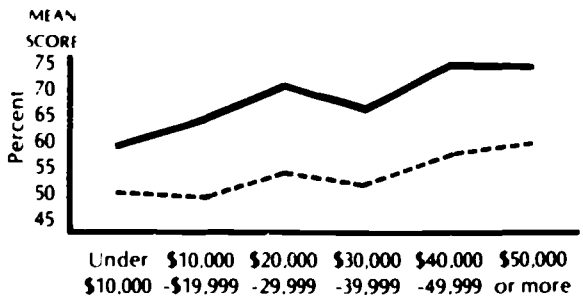


Figure 17
MEAN SCORES BY YEARS IN SCHOOLING

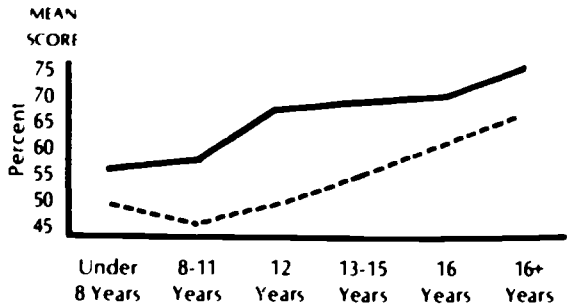
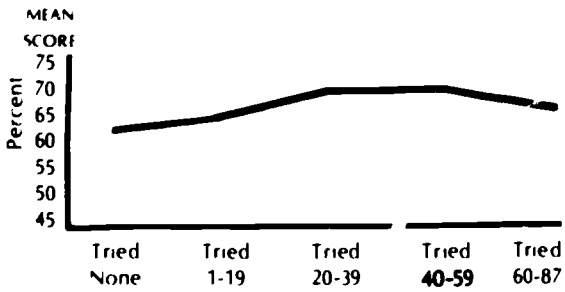


Figure 18
MEAN POST-STUDY SCORES BY NUMBER OF SUGGESTED ACTIVITIES TRIED



PROGRAM PROCEDURES AND RESOURCE MATERIALS

Providers participating in the study were expected to make changes, both in their level of understanding of relevant subject matter and in actions related to recommended child care practices. The extent to which they were helped in making these changes depended on the helpfulness of resource materials and their ability to be used by the providers.

Perceived Program Benefits. Participating providers rated the helpfulness of this pilot program on several potential benefits. The most beneficial aspects of the pilot program, according to these 437 providers, were the supply of resources they could use later (or whenever needed) and awareness of what they should know and do. More than three-fourths indicated that the program was very helpful for allowing them to learn on their own, apart from attending classes or meetings, and for improving their skill and knowledge. (Table 29)

Fewer than 7 percent rated any of the possible benefits as being "little" or "no help." The ratings show that this program was very helpful to providers in a variety of ways, including improving their confidence for learning.

Helpfulness of Various Resources. Another aim of the pilot project was to test the usefulness of the manual and videotapes as resources for learning on one's own. Providers' perceptions about the usefulness of the study manual, videotapes and certain resources within the manual are shown in Figure 19.

All resources were reported to be very helpful; fewer than 10 percent rated any of the resources to be of little or no help. However, 20 providers (4.6 percent) said they did not use the help of the county Extension agent-home economics and 19 (4.3 percent) did not use the videotapes.

Videotape Usage and Helpfulness. Most (89 percent) of participating day care providers watched the videotapes. In this 89 percent group, 53 percent rated them as "very helpful" and 34 percent rated them of "some help." Only 8 percent said the videos were of little or no help. In general, the comments about the videotapes from providers and Extension agents alike were positive and complimentary.

Although the four video programs were kept under 20 minutes so a provider could watch a program in a short amount of free time and then study the appropriate manual section, actual usage patterns were quite different. Seventy-three percent of the providers reported watching all four videos at one time, while 16 percent watched them at different times. Day care providers may have longer blocks of time available than the project designers thought, or providers who borrowed or rented VCRs may have felt a need to watch the tapes as soon as possible.

Twelve providers said they saw some but not all four of the videos. Their viewing was similar to the pattern for studying the manual—more providers saw the child guidance video than the management videotape. Among the 12 who saw only certain videos, only two viewed the one on management, five saw the nutrition video, six saw the health and safety video and eight watched the one on child guidance/development.

About half (57.6 percent) who used the videotapes said they watched the videos before they read the manual, the rest (42.3 percent) saw the videos after reading the study manual. (Table 30)

Television is an excellent medium for highlighting and reinforcing ideas, but less successful at teaching details. Several comments from providers indicated they thought the videos were repetitive of material in the manual; another asked for more detail. Not all learners need reinforcement of concepts equally, but the videos and manual together were designed to provide this type of overlap.

A couple of providers' comments indicated the videos were viewed as "entertainment" and therefore not necessary for the project. This could reflect an attitude toward using television as a learning tool.

The videotapes were also designed to heighten interest and show realistic scenes of recommended practices that would be credible to day care providers. At least one comment indicated that providers thought the "real life" material was helpful and informative to watch. Another, however, faulted the tapes for showing homes that were like day care centers, and unlike a home "most" providers were likely to have. Since the videotapes were made in five actual day care homes from different racial-ethnic groups and socioeconomic levels, the programs attempted to be broadly representative. Viewers that find them unrealistic may be wanting to see more homes that reflect their own situation, or may be unable to identify with exemplary homes because their own practices are at such great variance from those depicted.

In assessing the use and impact of the videotapes in relation to the manual (which was rated most helpful by 94 percent of the providers) it is especially important to consider the participants in the pilot study. For the most part, they were a

Figure 19
PROVIDERS' "VERY HELPFUL" RATINGS OF RESOURCE MATERIALS

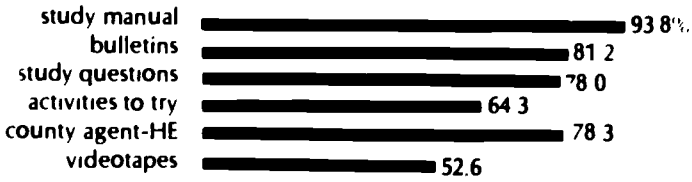


Table 29
PROGRAM BENEFITS RATED VERY HELPFUL

	N	Percent
For acquiring resources for later use	370	84.7
Awareness of what to know and do	365	83.5
Learning on your own (not going to meetings)	340	77.8
Improving skill or knowledge	339	77.6
Improving confidence for learning	304	69.6
Building your status as a provider	302	69.1
Changing an action or practice	251	57.4

Table 30
METHOD OF STUDYING VIDEOTAPES

	N	Percent
Saw all videotapes at one time	319	73.0
Viewed parts at different times	70	16.0
Viewed only some parts of the videos	12	2.7
Did not use the videotapes	25	5.7
Not ascertained	11	2.5
	437	99.9

Table 31
ORDER IN WHICH PARTS OF THE MANUAL WERE STUDIED

	Sections in the Manual							
	Child Guidance		Nutrition		Health & Safety		Business & Management	
When studied	N	%	N	%	N	%	N	%
First	377	86.3	16	3 7	16	3.7	29	6.6
Second	20	4.5	327	74.8	44	10.1	30	6.9
Third	18	4.1	54	12.3	307	70.3	20	4.5
Fourth	11	2.5	17	3.9	39	8.8	311	71.2
Did not study	11	2.5	23	5.3	31	7.1	47	10.8

Table 32
AMOUNT OF TIME DEVOTED TO STUDYING THE MANUAL

Time studied	Child Development		Nutrition		Health & Safety		Business & Management	
	N	%	N	%	N	%	N	%
1-4 hours	241	55.1	245	56.1	252	57.7	244	55.8
5-9 hours	138	31.6	118	27.0	111	25.4	101	23.1
10-14 hours	34	7.8	27	6.2	33	7.6	26	5.9
15 hours/more	13	3.0	14	3.2	8	1.8	8	1.8
did not study	2	0.4	10	2.3	10	2.3	18	4.1
no response	9	2.0	23	5.2	23	5.2	40	9.2

relatively well-educated group, with high school or some college education. They were also motivated to participate in this project on an experimental basis, showing their concern for professional development. This type of audience should be capable of benefiting from using only the manual and mastering the detail that it provides.

The videotapes were included in the project partly to reach those people who are less likely to read and comprehend written material. This may include, but not be limited to, persons with less education. The pilot study did not really provide a test of this video resource under these circumstances. As the program continues to be used, the videotapes should be an even more important resource for this audience.

Agents reported on the accessibility of video equipment because this was an important part of project participation. Providers were expected to benefit from seeing the videotapes, alone or in combination with the study manual.

Videotape equipment apparently was readily available, either at home, by renting or borrowing. Only two agents said that two providers had no VCR access; four agents said one provider in the county had no access—accounting for 8 providers out of the 500 enrolled.

Agent reports show that more providers had their own VCRs than borrowed or rented them. Some used equipment from school or library.

In only five of the 28 counties were local suppliers needed or found to provide VCR equipment, but in 4 of those 5 where indicated, the VCRs were supplied at a special rate for this program.

How Resources Were Used. Providers appear to have reviewed the study manual in the order in which it was printed. Most (86.3 percent) said they studied the first section (Child Development and Guidance) first, the second section (Nutrition) second, the third section (Health and Safety) next, followed by the last section (Business and Management). The last section was the one more providers said they failed to study, if they skipped any portion. However, it appears that most providers (75-90 percent) were able to review at least part of every section in the study manual. (See Table 31.)

As indicated in Table 32, providers devoted from one to ten hours in the various sections of the study manual. About half of the providers said they studied less than five hours per section, or about 20 hours for the whole manual. About 10 percent of the providers did not study the manual at all, although about the same percentage of providers studied a great deal, more than 10 hours for each section.

The pilot program limited provider access to materials to about four weeks. Agents were to finish Group I and start Group II within a one week time period to stay in program guidelines. While most agents were able to stay within the suggested time frame, several had difficulty with two four-week periods for collecting evaluation data from providers. Agents' conflicting schedules and the added load of having to contact providers individually rather than in a group created some overload.

Application for CEU. Continuing Education Units (CEUs) were offered as a program incentive and this aspect of the project was most surprising in its result. An arrangement to award CEUs set a precedent—no other independent study course had been given such approval by Texas A&M University. The project team and agents generally felt that few would apply for the continuing education certificates because a "completion" certificate was automatically awarded to those who turned in the evaluation materials. The passing score was not announced in advance, although the project publicity indicated that the CEU was not automatic.

Two sources were used to set the level for awarding three (3) units: mean minimum score preferred by panel of 55 experts and comparison of actual scores on Group I pre- and post-study questionnaires. Given the conditions of limited study time, documented improvement in scores, and expectations by professionals and others for providers' performance, the qualifying score for CEUs was accepted at 60 percent (45 correct responses of 75 test items) by Texas A&M University's Office of Professional Development.

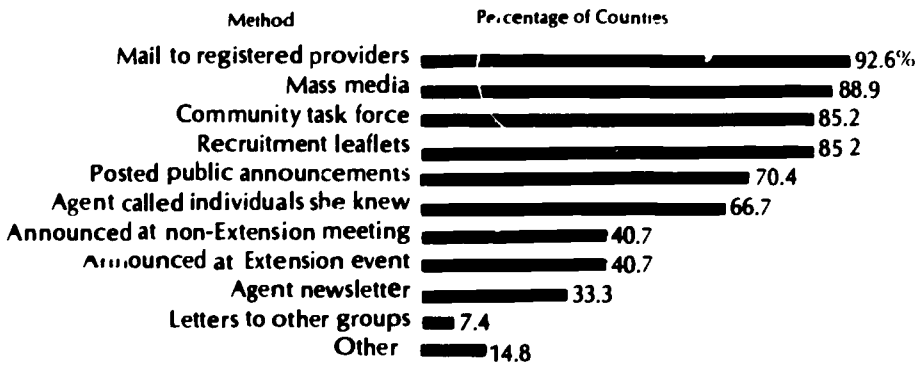
A high percentage, almost 83 percent (397) of the providers, applied for the CEUs as they enrolled. At the end of the pilot period, 302 (76.1 percent) had qualified on the basis of 60 percent post-study score with submission of the provider study record.

Three counties experienced problems in CEU management and paperwork. Agents did not understand the instructions and handed out the CEU forms before participants had actually qualified. In addition, some agents said their providers had questioned the need for a qualifying score when CEUs had been awarded only for attendance at other courses.

USAGE OF RECOMMENDED PROCEDURES

Agents' Use of Promotion Methods. Marketing techniques generally favor promotion of a new program or product by a combination of several methods. Different people learn in different ways; people are exposed to vast amounts of new information and become selective in what they attend to. More than one contact is usually needed to make people aware of a program or service that is available to them.

Figure 20
PROMOTION METHODS USED IN THE COUNTIES



Agents who piloted this family day home care provider program in their counties received materials to use in promoting the program. They were also guided toward using a variety of contact methods, including the direct methods of a community task force and personal contacts, individually or through meetings, and the indirect mass media methods.

Figure 20 shows the percentage of counties which used the various promotion techniques and resources. Perhaps because TDHS gave each agent an updated mailing list of registered providers in their county, mail was the most used method. Agents used mass media as well and the indirect methods appeared to be effective, when compared to how providers said they learned about the course and the high overall response/participation rate for the program.

Agents reported that both the community task force and cooperation from mass media were helpful in program promotion and recruitment. Many agents used personal contacts with providers.

Response to the Promotion. Nine agents (a third of the piloting counties) said that fewer than ten registered providers, the targeted clientele, inquired about taking this course. Almost half of the counties (13 agents) said that between ten and thirty registered providers inquired about the course. Four counties had more than 30 inquiries for their quota of 20 participants.

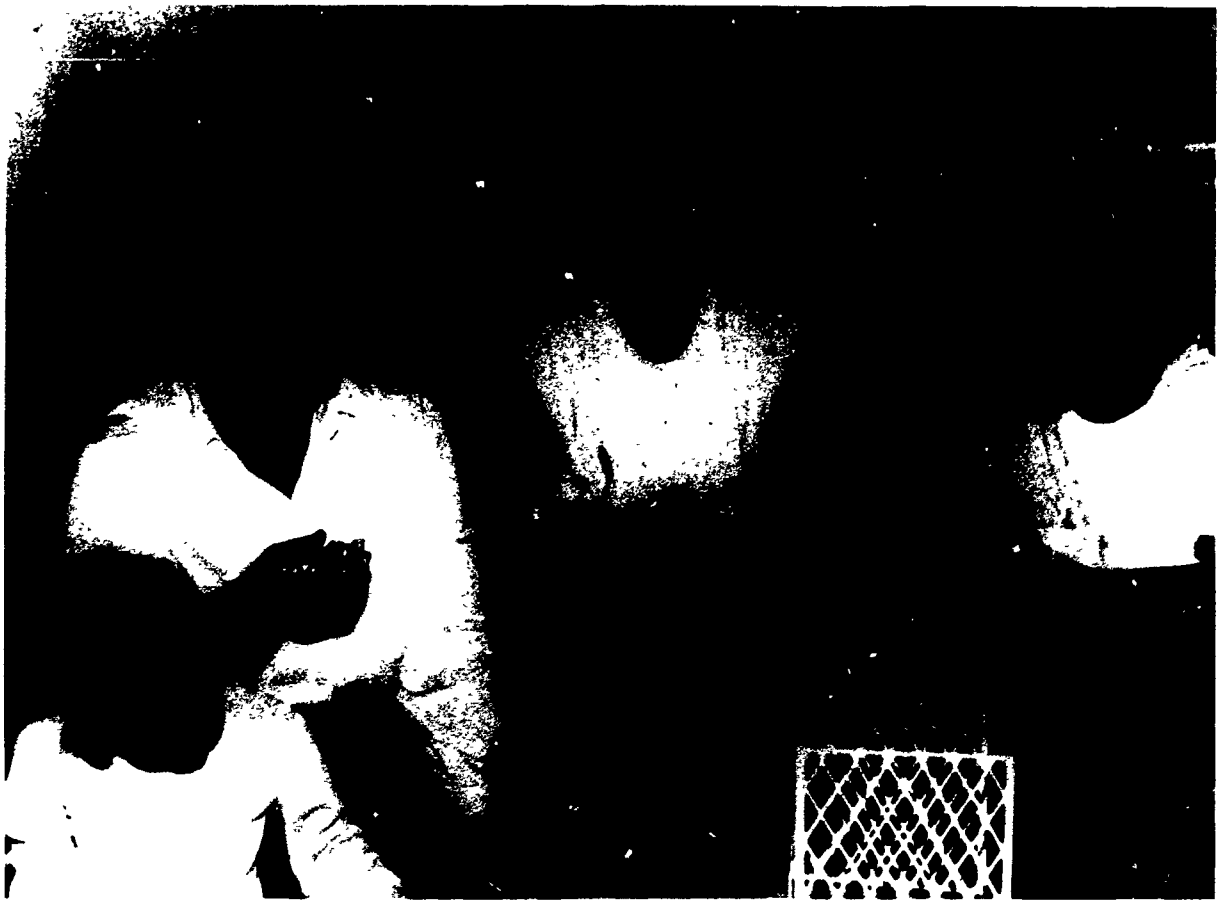
Whenever agents could not fill their enrollment with registered providers, they were to admit non-registered providers into enrollment. But more than 70 percent of agents said they had few inquiries by non-registered providers; only six agents reported that more than ten non-registered providers asked about program participation. Enrollment information from agents indicated that 75.5 percent of the participants were registered providers, 12.8 percent were non-registered providers; the status of the other 11.7 percent was not obtained.

Because the pilot project had an enrollment limit, some counties had more inquiries and interest than could be accommodated. Several urban counties had to limit participation because of the limitations on pilot materials, but they kept a list for future project enrollments. Eleven agents reported enough interest to have a waiting list for the continuation of this program.

Difficulties experienced by some counties in recruitment included provider concern about program evaluation and testing procedures, a need by some providers for Spanish translation of the materials, and a lack of interest in the training (presumed to be because of community college offerings already available).

Administering the Test Questions. At first, the project coordinators expected that agents could arrange an introductory meeting for each project phase to distribute materials, administer pre-study tests, and get information about the VCR access, CEU interest and other aspects of the pilot program. Agents called the meetings, but were not able to reach all participants with this method alone.

In 86 percent of the counties, pre-study questionnaires were administered at a group meeting combined with some individual contacts with providers. Two counties carried out the pre-study evaluation with individual providers. Almost 90 percent of the agents reported that both a group meeting and individual contacts were needed on post-study evaluations. This added time to project



Janie Embers, Vernon, was a member of the review team during development of pilot program materials. She is shown with children during free play period in her day care business.

- from The Vernon Daily Record, January 5, 1987

management, which neither agents nor project team members anticipated at the start.

Answering Providers' Questions. Agents served as resource persons to the pilot program providers, rather than as direct teachers in a classroom situation. In their project assessment, agents were asked to indicate the number of questions they had received from participants about aspects of the program.

Agents reported few questions being asked—only one or two per county on most subjects listed in the report. Most questions directed to agents related to project procedures, but some providers asked questions about the subject matter in the project.

Conducting Home Interviews. An average of four interviews per county were conducted, for a total of 128 in-depth discussions about practice changes from this program.

A few agents reported their own insecurity in conducting a home interview. Others said it was difficult to schedule times that were convenient to both provider and the agent. Several agents thought it would have been more meaningful to conduct home visits after a greater period of time had elapsed between the study and interview.

The project team felt that the information that was gained through the home interviews gave greater insight into the impact and acceptance than was obtainable through the pre- and post-questionnaires and study records alone.

Recognizing Pilot Program Participants. Successful completion was recognized in all the counties by the county Extension agents-home economics. In six counties, agents indicated that they held special events to close out the program and express appreciation for the providers' participation.

Because providers have difficulty in attending

meetings (a fact already established as a basic need for program methodology), 78 percent of the counties recognized the participants on an individual basis or by mail, rather than in a group meeting.

EVALUATION OF THE TRAINING AND PILOT PROGRAM

Agents' Reactions. How did the piloting agents get involved? Eleven (40.7 percent) said they volunteered, 15 (55.6 percent) said they were asked by their supervisor. One agent transferred into a piloting county.

Overwhelmingly, agents said they had wanted to participate in this pilot program. Only three of the 27 said they did not initially want to be involved. Agents were asked at the end of the program if they would be willing to be involved again and more than three-fourths (77.8 percent) said they would. The six who declined cited reasons that were related to lack of provider interest in their area and needing to devote time to other work responsibilities.

How well did the three-day training help the agents to carry out the management requirements in their counties? Agents responded at the end of the pilot program (four months after the training) by rating the helpfulness of various aspects of the training and offering suggestions for the program when it is put into effect throughout the state.

Their evaluation of the training was very favorable. A five-point rating scale (1 for "not helpful" to 5 for "very helpful") was used to rate 16 components of the training from procedures to concepts to motivation. The ratings by the participating agents are shown in Table 33.

According to agents, the training was most helpful to them for understanding the targeted day home care provider clientele. It was least helpful for helping them anticipate problems (in handling aspects of the program) or in rewarding their participation in this pilot effort.

TDHS's Evaluation of the Training. As part of the contract, TDHS provided evaluation of the training program, including consideration of 13 items and ratings from "not part of training" to "good" to "excellent."

The TDHS observer ranked eight items in the top category of "excellent" and two as "good." Two other categories were not scored because of the training design. The observer wrote that "the entire event was well organized, well received and a credit to team efforts."

Table 33
AGENTS' RATINGS OF THE PROJECT TRAINING

Mean rating	Component
4.69	Understanding day care providers
4.69	Understanding purpose of this program
4.42	Increasing agent's motivation
4.38	Promotion and enrollment ideas
4.38	Answering agents' question
4.36	Recognizing issues related to child care
4.27	Understanding business and management concepts
4.27	Understanding health/safety concepts
4.23	Increasing agent's confidence (for piloting)
4.23	Handling the paperwork involved in the project
4.19	Understanding nutrition concepts
4.19	The evaluation procedures/requirements
4.15	Understanding child guidance/development concepts
4.08	Using videotapes
3.92	Anticipating problems that may come up
3.64	Rewarded my participation in the pilot program

CONCLUSIONS ABOUT THE FUTURE OF THIS PROGRAM

The design of the pilot program involved using the existing educational delivery system of the Texas Agricultural Extension Service and its staff to reach a targeted clientele—family day home care providers. Careful attention was given to details that could be carried out in any Texas county as part of the on-going Extension educational program.

Findings from the pilot phase exceeded expectations on four factors: enrollment numbers, the expression of interest and need by providers for materials of this type, the number of providers desiring continuing education units (CEUs), and the ratings of helpfulness of the resources. Expectations were not met in regard to the number of providers who had had no previous Extension contact, perhaps because providers used Extension more widely in counties than was expected.

A statewide program like this one, using county-based Extension agents as managers, requires substantial training and supervision to assure that each component is handled adequately. Agents must understand the program's design for knowledge testing and maintain the appropriate time frame for testing and awarding of CEUs. Careful handling of paperwork is essential.

RECOMMENDATIONS FOR PROCEDURES

Data gathered from the pilot program provided sufficient evidence to recommend continuation of the program with certain changes in procedures and handling of materials. These changes include the following decisions.

1. For program management and adequate use of video materials, agents should determine a three-month designated program period each year in which to offer the independent study program in their own county, instead of the program being "on call" year around.

2. Providers should purchase the program manual directly from TAEX's Department of Agricultural Communications for the fee deemed appropriate by pilot participants and staff recommendations. In the post-study questionnaire, participants indicated the fee they felt would be acceptable for providers to pay for the course materials. Almost half (46 percent) said $20-$25, although 15 percent said $30-$35 and a third said the fee might be $10-$15.

3. Participants should not be required to purchase the videotapes, but to register and reserve them for viewing through the county Extension office. Providers should also be able to select from suggested additional resources and order from the source (including local Extension offices) rather than these being supplied within the manual.

4. Providers desiring CEUs should be required to score 70 percent or more on a post-study test adapted and prepared by the design team, but administered by the local county Extension agent. Grading should be done by a staff member in College Station.

5. Providers who complete the independent study and turn in the study record should receive a program recognition certificate.

FAMILY DAY HOME CARE PROVIDER PROGRAM - THE NEXT STAGE

In April 1987, county Extension agents throughout Texas received information on program implementation. Some counties will offer the program in July 1987. An estimated 3,000 (16 percent of the 19,000 registered Texas providers) could be reached during the first 12 months. The project is designed and expected to become self-supporting through sales of the manuals, which can be printed and distributed as they are needed.

Information about this program is being shared with Extension administrators in other states. The program will be made available for their use or adaptation, as appropriate.

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APPENDIX

PILOT PROGRAM PARTICIPATION BY COUNTY

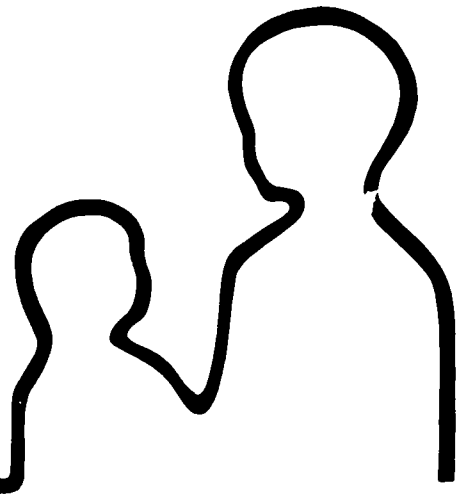
County and Extension Agent	TAEX District	TDHS Region	Original Quota	Enrollment	Completion*	Applied for CEU	Received CEU	Interviews
BAYLOR/YOUNG - Billie McMorris Mary Greer	3	04	20	20	18	15	8	5
BRAZORIA - Toy Smith	11	11	20	20	20	20	17	6
EL PASO - Marian Farr, Sue Brown	6	03	20	20	20	20	13	6
HARRIS - Clemogene Wilson	11	11	20	20	20	20	14	8
HARRISON - Flo Jasmer	5	07	20	20	20	20		5
HIDALGO - Ida Patrick	12	08	40	20	15	15	4	3
HILL - Carol Arndt	8	06	20	10	9	4	2	5
HUNT - Teresa Vizenor	4	05	20	20	20	19	17	6
KAUFMAN - Rita Lindsey	4	05	20	20	15	15	9	2
KERR - Jerrilyn Ray	13	09	20	16	16	16	14	2
LAMAR - Mary Lou Williamson	5	07	20	5	4	4	4	2
LAVACA - Nancy Fuhrken	14	08	20	20	20	13	10	6
McLENNAN - Charlotte Talley	8	06	20	28	26	22	19	5
MIDLAND - Marian Farr	6	12	20	14	13	12	9	6
NACOGDOCHES - Belinda Covington	9	10	20	8	6	4	3	2
PANOLA - Jeannette Milstead	9	07	20	10	9	6	6	3
PARMER - Janette Pierce	2	01	20	13	13	12	10	4
POTTER - Irene Keating		01	20	20	20	20	13	6
RANDALL - Barbara Fowler	1	01	20	20	20	20	18	6
RUNNELS - Dana Craddock Sandra Dresser	7	04	20	16	13	13	9	4
SAN PATRICIO/ARANSAS - Kaye Woodward	14	08	20	21	20	19	16	6
SCURRY - Kathryn Roberts	2	04	20	14	14	10	9	4
TOM GREEN - Sandra Dresser	7	04	20	16	16	16	15	10
TRAVIS - Nancy Lockhoof	10	06	20	51	20	14	11	4
VAL VERDE - Leslie Frazier	14	09	20	11	10	5	3	2
WICHITA - Barbara Fangmann	3	04	20	20	20	20	17	6
WILLIAMSON - Carolyn Bonner Judy Adkins	10	06	20	20	20	19	16	4
			560	504	437*	393	302	128

*This column represents the usable data (completed evaluation information from providers, that comprise information in this report.

Texas Agricultural Extension Service

People Helping People

Report Summary



A Family Day Home Care Provider Program

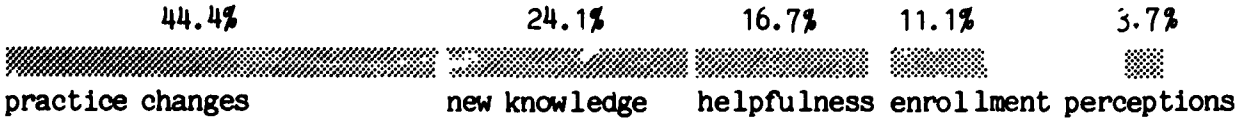
By Mary G. Marshall, Extension Program Development Specialist (Project Evaluator)

THE PILOT PROGRAM: Concern over the quality of child care in Texas was the issue prompting development of an Extension program to reach people who care for children in their own homes. The pilot phase was funded in part by the Texas Department of Human Services (TDHS) and Corporate Child Development Fund for Texas.

The Texas Agricultural Extension Service (TAEX) developed and distributed materials through County Extension Agents-Home Economics. A study manual was supplemented with a set of videotapes, both for individual study by family home day care providers in their own homes. The four-week study period started and closed with tests to determine providers' knowledge and the effectiveness of these materials for increasing child care knowledge in four areas: health and safety, child development and guidance, nutrition, and business and management.

HOW MUCH MEANS "SUCCESS"?: Before providers in 28 piloting counties enrolled in the project, a 55-judge panel set criteria [shown by ▒▒] by which findings would be judged. Judges were asked: Upon what factors should the success of this pilot project be evaluated? They responded that the most important evaluation criteria are practice changes and new knowledge:

MOST IMPORTANT EVALUATION CRITERIA



Actual results [▒▒] are compared to the criteria in each category, following.

Major Impacts of the Pilot Program

CHANGING CHILD CARE PRACTICES

50% should make some change
72% were changing some practice

54% should change a child development/guidance practice
35% were changing a child development/guidance practice

52% should change a nutrition practice
41% were changing a nutrition practice

56% should change a health and safety practice
72% were changing a health and safety practice

57% should change a business and management practice
54% were changing a business and management practice

Practices were changed--The evaluation sought information about changes providers made as a result of studying these child care resources. In the health-safety area, 72% said they were changing ways of handling emergencies, 42% said they were checking for a child's illness before parents leave. In business and management, 54% said they plan to start checking to see if income covers costs, and 50% were beginning networks with other providers. In nutrition, 41% were making changes on feeding to encourage development, 33% were beginning to write menus for a whole week. In child development and guidance, positive discipline was started by 35% of participants and dividing space for noisy and quiet play was started by 28%.

The two practices having the greatest impact overall were "using positive discipline to direct the child's behavior" and "having rules and routines about behavior which children, parents and provider all know."

INCREASING CHILD KNOWLEDGE

31% increased scores 1-9%
34% increased scores 10-19%
23% increased scores 20-45%

Knowledge increased—A major indicator of success was the amount of learning-knowledge change, measured pre- and post-study. Tests were computer scored; data analysis showed a significant difference (pr>0.0001) in pre- and post-test scores. Pre-study scores averaged 55%; post-study scores averaged 68%. 76% achieved a final score (60% or higher) that qualified them for three continuing education units (CEUs) from Texas A&M University.

RATING HELPFULNESS OF RESOURCES

80% should rate resources "very helpful" or "helpful"
99% manual rated "helpful" to "very helpful"
97% bulletins "
97% study questions "
95% activities to try "
87% videotapes "
92% County Extension Agent-Home Economics "

USING ALL THE RESOURCE MATERIALS

68% should study the whole manual
88% studied all parts of the manual
89% viewed all four videotapes

Resources were very helpful--The learning method was independent study at home. Participants were working persons who had to make time for study Most said they spent from 1-9 hours on each section of the manual and also saw all the videotapes on home VCRs. Participants rated the helpfulness of all resources. Various resources got highest ratings "very helpful" to "helpful" ranging from 87% for videotapes to 99% for the study manual.

REACHING A HIGH ENROLLMENT AND COMPLETION

80% of the Texas Department of Human Services contract should be a "success" (408 participants)
100%, 504 people actually enrolled
352 were registered providers--the targeted group

70% of participants should complete (not withdraw)
87%, 437 participants completed

43% of participants are expected to seek Continuing Education Units from Texas A&M University
90% applied for CEUs
77% passed post-study test for CEUs (scoring 60%+)

REACHING NEW EXTENSION CLIENTELE

72% should be new Extension contacts
54% were new Extension contacts

Participation was high--We contracted for 500 providers in 28 counties. 504 family home day care providers enrolled and 437 completed all participation and evaluation requirements. Opportunity to obtain Continuing Education Units appeared to be a participation incentive.

On average, these participants were 36.5 years old, married (84%), high school graduates, and 66% had household incomes ranging from $10,000 to $40,000. 76% were registered with the Texas Department of Human Services. 86% considered family child care as their regular occupation and they had about 5 years experience in child care business.

A new audience for Extension was reached through this pilot program; 54% of the participants said they had no prior contact with Texas Extension as an information provider. After the pilot phase ended eleven counties had waiting lists for future enrollments.

Benefits were gained--The primary outcomes included acquiring resources for later use, more awareness of what to know and do as a care provider, and improving their skill and knowledge. Providers also gained from the opportunity to learn on their own, apart from attending meetings. Several counties reported that providers formed networks--for meetings and telephone contact--after this pilot study.

See the Evaluation Report of Child Care--A Family Day Home Care Provider Program. For further information, contact Diane Welch, Extension Family Life Specialist, Special Services Bldg, Texas A&M University, College Station, TX 77843-2251.

Prepared February 27, 1987

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